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Address.

SOME REMARKS ON THE PRESENT STATUS OF MEDICAL EDUCATION IN THE UNITED STATES.*

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Gentlemen of the Association: In the first place, I desire to say that I greatly appreciate the honor that you conferred on me last year in electing me president of this body. When we compare medical education in our best schools in this country to-day with that of twenty or thirty years ago we feel that we have just cause of self-congratulation. Many of us here to-day went through the course of medicine in two years of six months each, and even then many of the lectures and demonstrations given the first year were repeated in the second. Many of us had but little, and possibly some of us no laboratory instruction other than that of the dissecting room. Now, all the colleges in this association give courses which extend through four years, none of which are less than six months in duration. The majority of these schools have graded courses, thus doing away with all repetition of lectures and demonstrations. The laboratory method has been applied to every branch of medical teaching, and the old theatrical clinic has largely been supplanted by bedside instruction. It is probably true that in no other department of learning has education advanced so rapidly as in medicine. All of this, I say, is a matter on which we as medical teachers may congratulate ourselves, and with some justness claim that we are giving to our students much more and much better instruction than our teachers gave us.

The object of my talk to-day is not to dwell on what has been accomplished in the recent past, but rather to emphasize some of the demands which the present and the future impose on us. We must not satisfy ourselves with the thought that we are doing better work than our predecessors in medical education did, but we must seriously ask ourselves whether or not we are to-day doing all that we should do. If my remarks should appear to some as too critical, please permit me to assure you that I have the welfare of the profession at heart, and that I am not desirous of doing an injustice to anyone, nor, indeed, do I desire to criticise any individual or any school. However, we are not likely to move forward and make improvements unless we become aware of our defects. A certain amount of self-esteem and pride is desirable, but when this article is stored up in quantity sufficient to lead one to believe that he has reached perfection, we can be sure that decay is rapidly advancing. With these preliminary remarks, I am going to say a few plain words with the best of intentions.

Within the past few years much has been said concerning the commercial spirit which has apparently invaded our profession to some extent. Numerous articles have appeared in our journals bearing on this subject, and it has been discussed in nearly every possible phase. The form of commercialism which has attracted most attention is the question of the division of fees between the attending physician and the consultant. This practice has been generally condemned, and it seems to me that the condemnation has been only just. Other forms in which commercialism manifests itself have been the exorbitant fees charged by a few specialists on account of which many people in moderate circumstances have been driven to free dispensaries and free clinics; and, on the other hand, cutting of fees and the doing of professional work, as it were, in job lots, for various organizations. It is needless for me to enumerate all the evidence that might be brought forward in order to show that our profession has not wholly escaped the spirit of commercialism which has so great a hold on the people of this country, and possibly other countries as well, at present.

I will ask the question whether or not our medical schools have been altogether free from commercialism. The individual practitioner places himself outside of the Code of Ethics if he advertises himself; and still if he be a member of a medical faculty he may indirectly do a great deal of self-advertising and still regard his actions as perfectly legitimate. As a rule, the better medical schools do not resort to advertising to any great extent, and as a general proposition it is true that the real value of a school is in inverse ratio to the extent to which it advertises. Dr. John Smith, as a private practitioner of medicine, would under no circumstances go to his brother practitioner's patient and laud his own ability and tell how superior his own attainments are compared with those of the physician in attendance; and yet Dr. John Smith, as secretary or dean of a medical school, does not hesitate to send circulars to students attending other medical schools, telling them of the superior advantages offered by his own institution. The same Dr. John Smith, reputable physician as he is, would hardly send a postal card to a friend in a neighboring town and ask that friend to return the postal card with the names of two sick persons, or to otherwise put him in communication with those sick in order that he might become their physician; and yet Dr. Smith, as secretary or dean of a medical college, sends out such postal cards by the hundreds. I have not known of any premium being offered for the largest number of prospective medical students about whom information could be given, but this is only one step in advance of what is being done, not by the poorest medical schools in the United States, but by some that claim a position among the best. Can it be a matter of surprise that the graduates of these schools enter the medical profession fairly well imbued with the idea that business success is the chief aim of the profession?

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* Presidential Address before the Association of American Medical Colleges, 1902.

Turning next to the requirements for admission to our medical schools, let me ask if we live up to the requirements which we advertise; and in the second place, are our advertised requirements as high as they should be? On the first of these points I want to say that no one can conduct a fairly large correspondence with prospective medical students without becoming aware of the fact that some of our schools do not live up to their advertised requirements for admission. For this sin on the part of certain schools there is absolutely no justification. There is at present no crying need for more medical men in this country, and certainly not for more poorly educated medical men. As to the second point, I am well aware of the fact that all medical schools can not advance the requirements for admission with the same rapidity. Harvard, with her five-million-dollar endowment, can well afford to cut the number of her students very materially, and this she has had the courage to do, but probably there is no other medical school in the country which could afford to make so radical a change in so short a time. But notwithstanding these facts, it seems to me that it is about time that this Association of American Medical Colleges should be making some advance in the requirements for admission. With the profession overcrowded as it is, with already too many ignorant men in its ranks, the demand for more must be small unless the recruits be selected with the best of care.

There are two ways of teaching medicine. These two methods require different material to start with and their finished products are radically different. Medical knowledge may be defined as embracing all information which can be utilized in the prevention or cure of disease. Physics, chemistry, anatomy, physiology, bacteriology and pathology are some of the sciences, the facts of which are utilized in medicine. Now, one way of teaching medicine consists in taking the isolated facts which can be utilized in the prevention or cure of disease from each of these sciences and teaching these to the student by rote, without ever attempting to give him any real knowledge of the sciences on which medicine is founded. A man may be taught how to fit glasses without ever having any scientific knowledge of the refraction of light or of the construction of lenses. A student can memorize maximum and minimum doses of the alkaloids without ever having any knowledge of the chemical nature of these vegetable products, and without any knowledge of the botanical classification of the plants from which they come. A man may be taught to stain tubercle bacilli, possibly to recognize diphtheria bacteriologically, and even to utilize the Widal test without knowing anything scientifically about bacteriology. A man with knowledge thus acquired and thus limited may pass a fairly creditable examination, but he is not a man who knows anything of real value concerning the sciences on which medicine is founded, and inasmuch as medicine is progressive, such a man is sure to fall behind within a few years at most, and become not an honor, but a disgrace to his profession. He is one who has built on the sands, and the house thus constructed must surely fall. There is too much of this kind of medical teaching in our country to-day. On the other hand, chemistry, biology, physics, anatomy, bacteriology, physiology and pathology should be taught to medical students as independent sciences, and no one should be allowed to enter the medical profession unless he has a fairly comprehensive grasp of each one of these subjects, and his knowledge must not be confined to those isolated facts which at present are utilizable in medicine. Then, when advances come, when changes are made, when new discoveries open up new fields, this man is able to keep abreast of the times. He has the scientific comprehension necessary in order for him to become an intelligent student of progressive medicine.

These statements will undoubtedly be met by the assertion that no one man can hope to make himself a master of any one of these sciences, and much less can he hope to make himself thoroughly familiar with all of them. While this is true, I claim that the medical student should be made perfectly familiar with the fundamental principles of all the sciences that directly contribute to medical knowledge. A man having this knowledge is not likely to cease to be a student, nor is he likely to be imposed on by advertising drug firms, which not only present him with unlimited samples, but have the audacity to tell him all about their therapeutical uses. For instance, the medical man who has been well grounded in the science of physiological chemistry is not likely to prescribe wine of pepsin or other alcoholic preparations of digestive ferments. Neither is he likely to be misled by any of the numerous newly coined words, which mean much or little, according to the way in which they are used. It seems to me that the only sure way in which the requirements for admission to our medical schools can be rigidly controlled and honestly adhered to is by the establishment of boards, no member of which has any connection with the medical school, which shall pass on all prospective medical matriculates. I am aware of the fact that this method is not wholly free from criticism. Such boards when composed of non-medical men do not always wisely discriminate between those subjects which best fit a man for the study of medicine, and those which, whatever their value may be in securing a broad education, are relatively of little importance in preparing one for medical studies.

It seems to me that there can be no question as to the desirability of every medical student having the ability to read either French or German, and if he can read both, his fitness for medical studies is greatly enhanced. It can not be denied that at present, at least, the most important contributions made to medical science come to us from German sources, and the man who must rely on translations in order to secure this information is, in the first place, delayed in acquiring the knowledge, and in the second place he is likely to be misled by errors in the translation. Did time permit I could point out numerous instances in which important articles in French and German have been misconstrued by the translator. There are two important sources of error in such translations. One of them lies in an imperfect acquaintance with the foreign language, and the other is due to the fact that these translations are often made by individuals who are ignorant of the subject matter involved in the contribution. Of the two languages, French and German, it is undoubtedly true that the latter is to the medical man the more important, and if knowledge of only one be demanded, German should be selected. The time may come, and I am inclined to think that it will come, when our own country will be quite abreast of Germany in scientific work, but such a time has not yet arrived, and the man who attempts to keep up with the times in a medical way without knowledge of the German language is, to say the least, heavily handicapped.

I suppose that no one will question the assertion that a fairly good grounding in the general sciences of biology is quite essential to the successful study of medicine. The preliminary work in this subject should cover a rather extensive course of reading and should always include a good drill in laboratory methods. In my opinion there is no subject so much neglected as a preparation for medicine as the study of physics and physical chemistry. A knowledge of physics is needed in the application of all mechanical means for the correction of deformities, for the treatment of fractures and dislocations, for the study of errors of refraction. and in the use of the microscope. ophthalmoscope. laryngoscope, x-ray apparatus, etc., and yet only a few of our medical schools demand any satisfactory preliminary knowledge of physics for admission, and still fewer of them offer the student any advanced work in this branch while pursuing his medical studies. In France and Germany the importance of physics to the medical student is thoroughly appreciated. A conversation which I had a few years ago with a clinical teacher in the University of Paris greatly interested me in this matter. He remarked that he could not understand how the best medical schools in this country could afford to neglect the teaching of physics. and added that his own faculty found it necessary not only to require an elementary knowledge of this subject for admission. but to furnish their students with advanced instruction in this branch while taking their medical course. In the German universities medical students take the same work pursued by their scientific colleagues in physics.

Physical chemistry is becoming of more and more importance, both in the study of physiology and pharmacology. It is true that the importance of this subject has been but recently recognized, and we must allow for a certain length of time necessary for medical schools to appreciate this new information and to provide means for giving instruction in accordance therewith to their students. The instruction in chemistry given to-day in many of our best medical schools is scarcely better than a farce. It embraces a semester's—possibly two semesters'—lectures with demonstrations covering the whole range of general, analytical, physiological, pathological and toxicological chemistry, supplemented by a brief course in the analytical laboratory. How can we expect the student whose knowledge of chemistry is limited to that acquired in such a course of instruction to comprehend the significance of Ehrlich's side-chain theory, or really to have any just comprehension of the nature of food principles, to say nothing of their assimilation and utilization by the cells of the body. A knowledge of the fundamental facts of general chemistry should be required of every applicant for admission to a medical school, and either before admission or after matriculation each student should be thoroughly grounded in the theories of organic chemistry and the general principles of physiologic chemistry, and to a certain extent in the methods of toxicologic investigation. I am aware of the fact that to do all of these things means to greatly increase the work which must be done by the medical student, and it is true already that there is no other profession proper preparation for which demands more time, energy and devotion and costs more money; but we must remember, as I have already stated, that there is no crying demand for more doctors, and we, the medical educators of this country, should have enough professional spirit to see that unworthy men do not enter our ranks. We must not mistake bigness for greatness, and we should have more pride in the quality than in the quantity of our products.

Shall we rely on our public schools to fit young men for the study of medicine? The public school system of most of the states in the union is probably better managed and is more creditable to us as a nation than any other state function. In the majority of the northern states, at least, this system was modeled during the early part of the nineteenth century after what was then known as the Prussian system. It embraces eight years of primary work, given for the most part by underpaid but well-qualified and conscientious women. From the primary grade the child enters the high school, in which he spends four years in acquiring additional knowledge. The high schools vary greatly both in the scope and the efficiency of their work. They are dependent on the wisdom and liberality of the school board, and, as a rule, they are free from the influence of political manipulators. Unfortunately this is not always true, but so far as my observation goes the high school is generally managed by fairly competent boards composed of men and women of more than average intelligence. In some few localities the political demagogue has not even spared this institution, and his corrupting influence has been felt in the selection of teachers and in the failure to provide proper equipment. It has been a part of my duty in the past fifteen years to know something in a general way of the high schools of the northwestern states. I have personally visited many of them and have frequently come in contact with teachers from a much larger number, and I have been frequently surprised at the excellence of these schools, even when situated in relatively small places and supported by relatively poor communities. As a rule, even in our larger cities the public school has better teachers, is better equipped and does better work than private schools in the same neighborhood, and a large proportion of our medical students have completed one of the two or three courses offered in one of these public schools. I take it for granted that no college belonging to this association will accept for matriculation anyone who has not had the equivalent of a high-school education, which, of course, means that the individual has had eight years in the primary and four years in the secondary schools.

Now the question arises, can we depend on these high schools to prepare young men for the study of medicine? In my opinion there are but few high schools which are sufficiently well equipped to prepare for the study of medicine, and we should demand additional instruction after graduation from the high school. In many of the high schools it still remains true that the classical course is the best offered. The teacher of Greek and Latin, who is frequently the principal of the school, is generally paid a higher salary than the teacher of the sciences, and in a general way the classical course is the best offered in our secondary schools. In our universities the classics are no longer paramount, but in the high schools the sciences have not, as a rule, received the attention they deserve. This, of course, will gradually be changed. On account of this condition of affairs I think that it will be found to be true that graduates of classical courses of our best high schools have had all the history and classics that can be reasonably expected of the man who intends to study medicine. At least they have had all that is necessary to the successful prosecution of medical studies.

In mathematics, graduates of such schools are, as a rule, slightly deficient, for mathematics in the classical courses of most of the high schools stops with plane geometry, and I am sure that every teacher of physics will agree with me that a knowledge of plane trigonometry is essential to the successful study of physics. However, the greatest deficiency among the graduates of classical courses in the high schools lies in the modern languages and in the natural sciences. The prospects are that more attention will be given to both of these in the future, but at present the average graduate of the average classical course in the high school has had inadequate preparation in the modern languages and in the natural sciences. I mean by this that in these branches he is not, in my opinion, prepared for the study of medicine, and he should be required to pursue these subjects in some well-equipped academy, college or university before he enters the medical school.

I should like very much to see this association make some move in the direction of advancing the requirements for admission. There has been no material advance in our requirements for the past ten years, and in this day of rapid progress ten years make a long time in which to lie dormant. I am inclined to think that unless some advance is made in the near future this association will not be able to hold together. Among its members there are schools whose requirements are much in advance of those of the association. These schools have been willing to continue as members of the association, hoping that they may be able to lend a helping hand to their weaker brethren, but they are not willing to stand much longer in this position.

I have referred to the desirability of placing the question of admission to medical schools in the hands of state boards, and I desire to say a few additional words on this subject. Of course, wherever this is done there are likely to be medical schools which will require more than the state board, but so far as I can see there is no objection to this. However, it must be admitted that such boards are likely to adjust their requirements not to the best medical schools in the state, but to the poorest, and this means that the latter receive a certain official recognition which misleads medical students and may induce them to go to an inferior school rather than to one of higher grade. However, I think that so far as we have experience with this matter in the United States the establishment of a board for the examination of medical matriculates has ultimately led to advancement in the requirements. Temporarily harm may be done. I believe that it is true, but on this point I have no exact information, that the establishment of the Ohio board has led to a great decrease in the number of medical students in the medical colleges of that state, and a corresponding increase in the number of Ohio students attending inferior colleges in other states. However, the time will probably soon come when the other states will have similar laws, and this matter will adjust itself. It is barely possible that a good school may be a little slow in advancing its requirements so long as it is able to throw the responsibility for admission on the state board, but after a while the good school will get ashamed of doing this and will advance its requirements whether the state board does so or not.

In conclusion, I wish to repeat that it seems to me that this association as a body is moving slowly in the advancement of medical education. Let us be up and doing and show some evidence of growth. The standing of our profession in the next generation and its influence on the nation will depend on those who are now entering on the study of medicine under our guidance, and we, as the medical educators of this country, will be held responsible, probably above all others, for the class of men who will constitute the profession of the next generation.

Original Articles.

REQUIREMENTS FOR ADMISSION TO MEDICAL COLLEGES.[*]

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A man who has not had a biologic training may become an excellent physician, although he will have to work harder to make up deficiencies. Some of the biologic work if not possessed by the student on entrance might well be included in the first year's course. It would certainly be a great advantage if more comparative work was required throughout the regular medical course. This could often well be done by eliminating some of the special studies which are properly postgraduate. In fact, the entire medical course could be remodeled to advantage.

It is not the business of a medical school to graduate specialists, nor is it the business of a medical school to make the course of such a character that only a few can succeed in accomplishing the required work. We should give to each student a good, general, solid groundwork and afford him an opportunity to determine in his own mind the particular line to which he is best adapted.

So far as the Latin requirement for entrance is concerned, I think that in many cases the substitution of French or German might be allowed. To require these languages for entrance, however, would be unnecessary, while a certain amount of one or both of them might be demanded before graduation.

To the investigator and specialist a knowledge of these languages is invaluable. At the same time there are excellent abstracts of important foreign literature promptly issued by American journals which make the language requirement of less importance than formerly. Even if the practitioner has a knowledge of these languages, unless he is one of the fortunate few located in a large city, or near a large medical library, he has but little opportunity to profit by this knowledge without subscribing for a number of expensive journals. If he does this he will usually find that the half-page abstracts of the article contain all the information that he desires.

I do not wish to be understood as undervaluing the advantage given by a knowledge of the modern as well as the dead languages, as no one could appreciate more thoroughly how useful they are in practical work. We should point out to the student the advantage which will accrue not only from a good knowledge of French and German, but also Spanish, at the present time of great practical value. We should encourage him to round off his medical equipment by acquiring a useful knowledge and not a mere smattering, such as is often given him in many schools and colleges at the present day. We wish to make a man's training as complete and thorough as possible, and give him the basic work, after which he will be able to recognize his own special abilities and select the line in which he can best succeed.

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[*] Read before the Association of American Medical Colleges, 1902.

For several years we[1] have refused advanced standing to graduates in veterinary medicine, dentistry, pharmacy and literary colleges, although the constitution of the association permits such recognition. Such graduates are, as a rule, not better able to cope with the medical course in a shorter time than those who lack a college training. A high-school graduate usually makes a better student than the average college graduate. The law of New York forbids the recognition of colleges that grant advanced standing for the degrees mentioned and none should be allowed.

Certain medical studies should be allowed to count towards an A.B. degree. An A.B. degree should not be allowed to count towards a medical degree.

No college, a member of this association, should receive a student from another school unless he holds a special letter from the dean of the school from which he comes. During the past year students have come to me from other schools with clean certificates, which on inquiry proved to be falsified. Some system should be adopted which will effectually prohibit such fraudulent attempts.

REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOLS.[*]

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It will aid us in discussing this topic to review briefly the quantitative requirements now exacted:

1. In accordance with statutory provision.
2. By individual medical schools.

In the state of New York a preliminary general education equivalent to graduation from a four-year high-school course after a completed eight-year elementary course is prescribed by statute as the minimum standard for license to practice medicine. Quantitatively this standard approximates that demanded in Continental Europe. Qualitatively it leaves much to be desired. The defects are being remedied, as I shall show later.

New Hampshire, Ohio and Vermont have similar requirements, but they are not as rigidly enforced. Wisconsin demands the equivalent of admission to the junior year of an accredited high school. Delaware, Maryland, New Jersey and Pennsylvania prescribe a "common school education," Louisiana "a fair primary education," Illinois and Iowa less than one year of high-school work, Maine and Virginia evidence of a preliminary education, Arkansas a good literary education where a licensing examination is required, Rhode Island a high-school diploma or its equivalent under the same conditions. In remaining political divisions laws and rules are either silent in this respect or so indefinite as to be of little value.

According to the latest available catalogues Johns Hopkins and Harvard exact a college course for admission; Western Reserve, the completion of the junior year in college (really, as appears later, Harvard should also be in this class; admission to baccalaureate courses, however, is higher than elsewhere); the University of Minnesota, the completion of the freshman year; 17, 9, 14 and 90 medical schools require respectively four, three, two and one year of high-school work; 11 demand a grammar school education; in three the requirements are indefinite.

At present only four medical schools in the United States exact more in quantity than is represented by the New York state medical student certificate. Later, in speaking of qualitative requirements we must also include in this roll of honor Columbia, Cornell, Syracuse, University of Michigan and, after 1904, the University of California.

In answer to recent inquiries 79 of the 80 medical schools of the United States giving definite information on the subject report that the New York state medical student certificate is accepted at its face value for entrance.

There has been substantial progress since 1900, but it is still true that when medical schools conduct their own entrance examinations the tests are often mere matters of form, even though the standards appear satisfactory on paper.

The five subdivisions of this topic call for a discussion of qualitative requirements. Up to this point we have spoken entirely of quantitative requirements. I think, however, that we shall get a clearer conception of the quality of the work that should be required by approaching the subject in this way.

A satisfactory uniform statutory requirement is impracticable at present, owing to varying conditions as to density of population, educational advantages and general development. It should be comparatively easy, however, with united efforts on our part, to bring about much more satisfactory conditions than those at present prevailing.

It is highly desirable that there should be a sufficient degree of uniformity in admission requirements to medical schools so that, as in other countries, students could go without inconvenience from one school to another for special lines of work.

In graduate schools it would seem sufficient to make a minimum requirement, as at Johns Hopkins, in languages, physics, chemistry and biology. It appears that Harvard, though nominally requiring college graduation, has been in the habit of accepting master degrees, which may represent nothing, or bachelor degrees, like the Spanish Bachillerato or the French Bachelier, which stand for little in advance of high-school graduation. Then, again, the combined course as at the Lawrence Scientific School and the medical school may be completed in seven years.

Graduate schools probably without exception will continue to be parts of great university systems, where work is organized on very broad lines, thus making it possible to vary to a considerable extent the requirements for an M.D. degree.

Next in order come those schools that demand for admission to the four-year medical course one, two or three years of college work. At present there are only two schools in this class, or three including Harvard. Here there is an excellent opportunity for work in Latin, French and German, physics, chemistry, biology and mathematics, to make good deficiencies in high-school courses.

We now reach the most important class, the schools that follow the New York statutory requirements in demanding for admission a four-year high-school course based on an eight-year elementary course. I say the most important class, though it now embraces only 17 schools, because this is the highest standard that will be obtained by a large majority of those who study medicine.

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[*] Read before the Association of American Medical Colleges, 1902.

screw clamped a second plate on the fold of tissue. This instrument was modified by Redfern Davies for large hernias, making a divided invaginator.

Leroy d'Etiolles and Langenbeck maintained the original fold by pressure forceps, the latter contrived to produce an extensive slough of the anterior fold by the prolonged pressure of the forceps. The cicatricial plug resulting occasionally produced a cure.

Agnew and White invented instruments which were on the same order as that of Wützer, differing, however, in that no instrument was left to produce pressure. Thread was passed through the tissue near the internal ring, which closed the canal. Mosner used a trocar armed with a thread attached to a seton which was passed up into the canal. The seton was left for three or four weeks. Gross, Rothmund, Schlosser, Ratier, Riggs and others also adopted this plan for a time.

Credit is due Dr. John Wood, who first recognized the principle which governs the cure of this defect in Nature, by sutures or approximating the pillars of the ring with pins, as in a hare-lip operation. Prof. S. D. Gross, in 1861, in operating for a strangulated hernia, performed a similar operation with success. A description of this operation is instructive, as it shows what erroneous ideas were prevalent at that time about the union of wounds. It was thought necessary for good, firm union that a certain amount of edema and ulceration was desirable. Dr. Wood, after having operated on 200 cases, gives 50 as the per cent. of cures in adults and 75 under puberty. A truss was advised by the doctor to be worn several months after the operation.

Dr. Van Best and J. Chisolm about this time did an operation, approximating the pillars with a buried salmon gut. Dr. Greenville Donell up to 1876 had performed 96 operations with 80 cures by the subcutaneous method, using silver wire twisted over cork.

William Spanton, 1879, contrived an ingenious method of approximating the tendons and muscular boundaries of the canal. Through an incision made over the mass the index finger was introduced to shove up the sac. An instrument resembling a cork screw alternately penetrated the opposite boundaries of the canal. This brought the walls together and held them for two or three weeks until union was firm.

The direct method of S. D. Gross, who was the first to cut down on the sac, freshen the edges of the ring and suture them together with wire, was soon adopted. The sac was variously disposed of, some tying it off and removing it, others simply tied it and inverted it within the abdomen. It seems strange that the simplest, most surgical and most beneficial operation of all for the cure of hernia should remain undiscovered so long. It is a natural outcome, perhaps, of the careful study of anatomy of the hernial region, the recognition of Nature's fault in not closing this opening to the abdominal cavity, and the possibility of remedying what Nature should have in the evolution of this region.

The ultimate success of an operation is of the utmost importance to the patient. Surgeons are obliged to await the verdict of their patients before they conclude that any special operation is a success or not. The profession has had a harder time to fight popular prejudice against operation for rupture than any other surgical procedure. The public has a perfect right to this prejudice because of the evil results which have occurred in the past. Failures have been so frequent that a perfect result was not always anticipated. Therefore, physicians themselves chose to fit a truss instead of advising a radical operation. The quack advertised extensively to cure rupture without an operation. There still exists large truss-fitting establishments which are too frequently visited by the general public, who are anxious to adopt a simpler method of relief and escape the risks which they imagine are connected with a surgical operation. Nearly every drug store makes a specialty of harnessing up these afflicted persons with all sorts of appliances.

The careful and successful work of the modern surgeon, however, is beginning to bear fruit in this class of cases especially. Thoughtful, scientific men have studied the problem of hernia so that we know an operation will cure if certain principles are observed. The operation is safer for the patient than to run the chances of strangulation, notwithstanding he may wear a truss.

There are few of us who have not seen a hernia return on account of infection, or from weak union, due to sutures absorbed too rapidly. The Johns Hopkins followers have the utmost confidence in the buried silver wire. Some patients are compelled to have these sutures removed later. The disciples of Marcy tell you there is nothing so good as kangaroo tendon. This also is not to be relied on, as has been found by many who have used it. Silk and silkworm gut is not absorbed. The continual irritation may result in infection directly through the lymphatics or blood current. So-called dry, sterilized catgut is frequently absorbed before union occurs, and is not always sterile. A nidus is formed in which micro-organisms grow more readily. The silver catgut has at times given endless trouble. We may offer the same objection to chromicized catgut. The iodoform gut is the least objectionable of all; it is more sterile, lasts longer than the dry, is more elastic, and, on the whole, is a very good suture, yet failures result in its use occasionally.

The pubic region is the most difficult portion of the body to render sterile, on account of the numerous sebaceous glands and hair follicles present. Owing to this fact infection is more frequent in this region than elsewhere. When sutures are tied tightly, or there is much tension on the opposed tissue, the skin does not resist the strain, but is strangulated or cut through. This occurs likewise in the deeper tissue. If there are any infectious micro-organisms at these points a deleterious inflammation arises.

Where there are so many different ways of performing the operation and such a variety of suture material used, our conclusions are that failure or unsatisfactory results occur, otherwise we would all adopt one special method. It would seem that it is not altogether the fault of the suture material if properly sterilized as much as the manner in which it is used. An analysis of a number of cases of relapse and failure leads me to suggest the following reasons for failures:

Too vigorous and rough scrubbing of the parts before operation with the idea that it is necessary for cleanliness. This produces minute pustules of the skin just prior to the operation.

Careless preparation of the parts and the hands of the operator, or because the operator and his assistants have not worn rubber gloves.

Because operations are performed on patients suffering with some constitutional or other local disease.

The employment of sutures that are absorbed too readily.

The use of sutures that are improperly sterilized.

Lack of identification of tissue, and necessarily improper approximation of the opposing structure, especially in cases where there is a very poor development of the fibers of the internal oblique and transversalis.

Too great tension from vomiting or pressure of gas from within.

Incomplete dissection of the sac and its ligation.

Because sutures are tied too tightly, causing pressure, necrosis and stitch abscesses.

The use of non-absorbent sutures which, being left, irritate the structure and result in infection.

Excessive handling of the parts at the time of operation, causing destruction of tissue, necrosis, sloughing and abscess.

The causes of inguinal hernia may be few or many. The tunica vaginalis may not have contracted completely, and there remains a slight pouch at the internal ring into which the viscus may enter and gradually forces its way into the canal. Increased intra-abdominal pressure from ascites or gas, straining from phimosis, constipation, stricture, prostatic hypertrophy, calculæ, coughing, etc., are exciting causes.

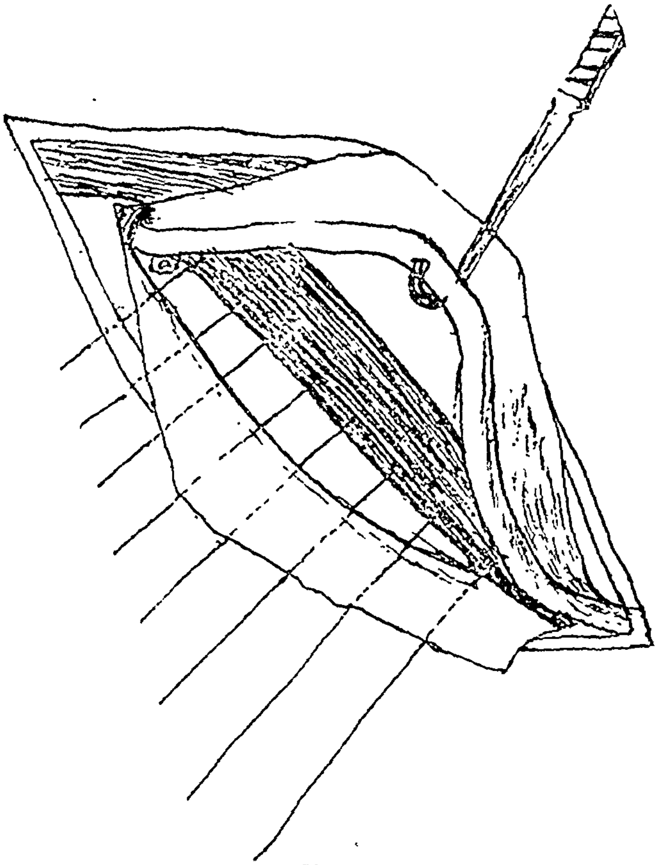

Figure 1.

When the tunica vaginalis remains open, a congenital hernia is inevitable. Weak muscular or aponeurotic development around the rings or canal are potent causative factors. This is emphasized by Dr. Ferguson in an article entitled "A Typical Operation for the Cure of Oblique Inguinal Hernia." The lack of development of the original fibers of the internal oblique and transversalis, he believes, is a most important cause of hernia and relapse.

The first symptoms of a hernia develop gradually. A weakness and dull pain is felt in the groin, or sick feeling and a weight may be present, especially noticed in walking or standing, *until the bowel enters the canal* and can be felt, first as a bubonocele and later as a complete or scrotal hernia. A strangulated hernia occurs where the bowel is rapidly forced down through the external ring. The pillars of the ring contracting on the mass, impedes the circulation of the protruding viscus, and causes greater enlargement from congestion. Inflammation and edema of the entire mass is present, making a reduction by taxis difficult or impossible.

The treatment may be divided into palliative and the radical. The palliative consists in wearing a good-fitting truss over the internal ring. A great many good trusses are now made which enable the wearer to get around with comfort, and which permit the patient to perform almost any work required. Yet there remains the danger of strangulation that may come on because of the weakness of the support from age and wear. The history of nearly every strangulated hernia is that the patient has continually worn a truss before the accident happened.

We can not blame persons for choosing this form of treatment when they may have knowledge of friends who, having had an operation, have the hernia return *and are unable* to wear a truss with the comfort they did before the operation, on account of cicatricial tissue formation, exaggerated because of a complicating abscess.

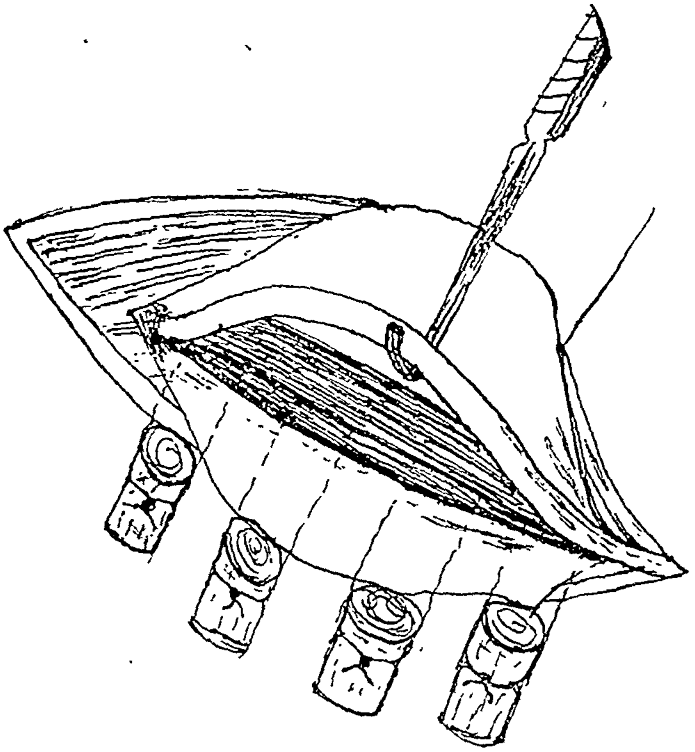

Figure 2.

The modern operations which have been devised for the radical cure of hernia are numerous. All have for an object the ultimate retention of the abdominal contents, by closing the breach with as firm a wall as possible, consistent with a healthful state of the cord and testicle.

We have few criticisms to make, if any, as far as appearance of the operation at the time is concerned. It seems, however, that, generally speaking, there are too many relapses.

A suture is useful to keep the parts in apposition until union has occurred, and until that union is firm enough to resist the pressure of the internal organs.

Any substance which has to be absorbed by the tissues lessens their vitality and serves to produce a culture media, in which micro-organisms may grow.* A non-absorbable suture material that can be positively sterilized by boiling has no effect on healthy tissue if properly placed and left for a few days. Any substance foreign in nature which can not be absorbed if left in the soft tissue permanently often acts as an irritant, which may cause pain or results in infection. The epidermis albus grows more rapidly where there is necrosis of the tissues, at the location of sutures.

The average surgeon is liable to tie sutures too tightly, and especially in doing an operation to cure a hernia. The idea uppermost in the mind of the operator at the time is to bring the tissue into such close proximity that no viscus can crowd through the wound while healing. This defeats the very object of the operation often by strangulating the tissue of the deeper or superficial layers. It results in pressure necrosis, a nidus for infectious germs, and consequently a deep or superficial abscess. Add to this a suture material that is absorbable, and these factors are augmented. A non-absorbable buried suture prolongs the healing when there is infection, and it acts as a guide for the invading germs to other would-be unattacked tissue, through which the suture passes. The experienced operator may avoid this catastrophe because he is able more accurately to gauge the tension of his sutures.

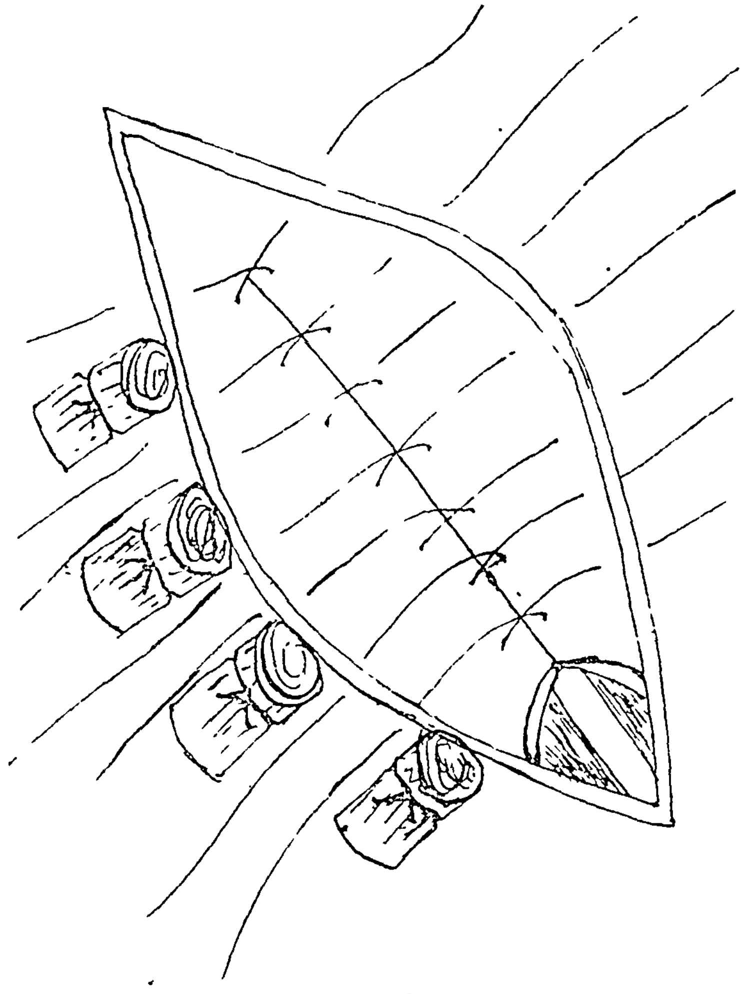

Figure 3.

A roll of sterilized gauze, to take off the force of too tight suturing and distribute the pressure, affords the average operator the protection and success of the more experienced surgeon. This method of operating for inguinal hernia is not new, nor do I claim that it gives better results in every instance. I do think, however, that the result is more satisfactory to the occasional operator for reasons above stated.

In preparing my patient, I prefer to shave the parts the morning of the operation. In doing so, we avoid infected areas or vesicles which may result when the shaving is done the previous evening or before the parts have been thoroughly cleansed. The time intervening between the evening and morning of the operation favors a greater multiplication of micro-organisms. The bowels are thoroughly emptied and subsequently kept free from gas accumulation. This lessens the internal pressure.

An ordinary incision for a Bassini operation is made. The aponeurosis of the external oblique is slit up to the point opposite the internal ring. The fibers of the internal oblique and transversalis muscles are divided by blunt dissection, thus opening the inguinal canal. The internal oblique and transversalis muscles are found closely connected. They are not separated, but the aponeurosis of the external oblique is carefully and thoroughly removed from the internal oblique. The lower portion is dissected down to Poupart's ligament and the transversalis separated from the peritoneum. Such careful dissection and positive identification of structures shows any deficient development and is an important help in securing direct apposition and firm union. The cord is now raised and silkworm-gut sutures are introduced to the outer side of the incision, passing through the skin, Poupart's ligament, the internal oblique and transversalis, on the inner side of which the loop is made. The needle, re-entering the transversalis and internal oblique, passes through Poupart's ligament and comes out through the skin to the outer and lower side of the cut, near the point of entrance. (Fig. 1.) From three to five sutures are similarly introduced. These sutures pull the internal oblique and transversalis below the shelving edge of Poupart's ligament, and are observed to make a firm barrier against any internal force. A double support is formed and any defect is corrected. The sutures are then tied over rolls of sterilized gauze. (Fig. 2.) The spermatic cord then rests on the internal oblique. The external oblique is then closed over the cord. Interrupted figure-of-eight sutures are introduced, bringing the external oblique in apposition with Poupart's ligament. (Fig. 3.) They also approximate the skin, and are tied over a gauze roll. (Fig. 4.) The sutures are usually left two weeks.

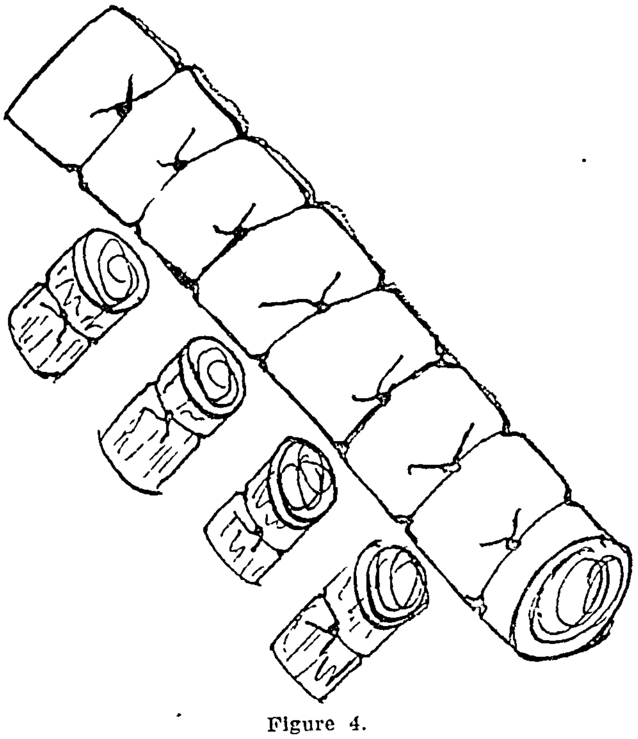

Figure 4.

The conclusions for this operation are:

1. There are no sutures for the tissues to absorb.

2. There is no additional culture media in which infectious micro-organisms grow and cause deep abscesses.

3. There are no buried, non-absorbable sutures left to irritate the tissues and cause further trouble.

4. There is no necrosis from tight sutures, therefore few, if any, stitch abscesses.

5. The gauze rolls act as elastic cushions which prevent scars from the sutures.

6. The operation completely closes the breech and makes a firm wall.

7. All sutures, after serving their purpose, are removed, leaving only the natural supports.

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EVOLUTION IN THE TREATMENT OF CANCER OF THE RECTUM.*

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Certain definite results are desired in operations on cancer of the rectum, namely, permanent cure, low operative mortality and a controllable anus, or its best substitute. These results are modified by location, stage of progress and the age and condition of the patient.

The gradual evolution which has led up to the treatment in vogue to-day makes an interesting study. Previous to 1870, operative treatment on cancer of the rectum was but limited in extent, and only performed by the great surgeons of that time; in fact, it was almost limited to nothing, palliation, and lumbar colostomy. Yet the results of these methods compared most favorably with radical operations.

At present a diminishing number of patients present themselves at such a late period that they fall within the limits of this type of surgery. Inguinal colostomy has replaced the lumbar. During the next ten years to 1880 there was a marked advance in all surgery. Instead of there being but a few surgeons with initiative, a large number were making active scientific progress. New and often similar methods of procedure were devised by surgeons widely separated and each without knowledge of the investigations of the others. This progressive spirit, which fortunately continues, resulted in many operations bearing the names of two and even three surgeons who had advanced the principles at about the same time.

In rectal surgery there were developed the circular enucleation of Lisfranc, perineal excision, Deffenbach's incision anterior and posterior to the anus, and the great advance made by Kocher in 1874, when he excised the coccyx to gain access to the rectum. Many surgeons still contend that by this method sufficient space is secured to accomplish the removal of all cases which should be attacked from below. Verneuil also deserves credit for removal of the coccyx at this time.

The difficulties which were most marked during this period were sepsis, which could not be avoided, stricture or incontinence from the loss of the anus, and recurrence, the most serious of all as well as the most frequent. The recurrence most commonly seen was probably from incomplete removal and at times undoubtedly from direct inoculation of the wound by the cancer. The direct inoculation of wounds by both cancer and sarcoma cells is a condition well understood to-day, and many operators to a certain extent avoid this complication by excising the anal and low-lying cancers of the rectum with a Paquelin cautery; others, when the cancer unavoidably contaminates the wound, apply carbolic acid, followed by alcohol, to prevent germination and absorption. Surgically considered, this was an epoch of drainage.

During the years from 1880 to 1890 was developed the germ theory which revolutionized surgery and medicine. This period was one of antisepsis and drainage. Operations in all lines of surgery became more radical. The perineal methods were made more complete. Rehn, a German, and Campenon, a Frenchman, at about the same time brought out the vaginal route for certain cases of rectal cancer, a method which has been so highly developed and popularized by Dr. J. B. Murphy. Steinthal removed invaginating cancers by means of an elastic ligature. In 1883 Volkman opened the sacral canal in an operation for sarcoma. Kraske, at that time his assistant, noticing that no harm resulted, was led to develop his sacral excision method of operation. Now all varieties of sacral exposure bear his name, although variously modified by Bardenheuer and others in being more extensive, by Heinecke, Roux and Rehn and others in preserving the bone by a temporary resection, and by Zuckerkandl in making a parasacral incision.

The difficulties which arose were from shock, which usually meant loss of blood; from peritonitis, as two-thirds of the Kraske operations necessitated opening the peritoneum; and from the attempt to perform radical operations on inoperable cases, as the damage to the bone, loss of blood and open peritoneum were necessary by this method, before the operator knew fully the extent of the disease. The anus had usually been sacrificed; now, where possible, attempts were made to preserve this outlet. Various methods of uniting the distal and proximal bowel were devised. Suture methods frequently failed, or partially failed, leaving permanent fistulæ, as did all methods much too often, were they plastics, Murphy's button or invagination. The Hochenegg method of invagination by passing the proximal end through the anus and suturing to the skin, was later modified by removal of the mucous membrane of the anus. One of the best methods was to draw the proximal bowel through the anus, which was inverted, and make a circular suture union, which is replaced within the sphincter. Lange made a half circular incision anterior to the anus, admitting of its being depressed two inches to reach the proximal end. With the anus saved, it was often found that the extensive mutilation had permanently injured its nerve supply, and when saved intact, that it required the levator ani and internal sphincter to render it functionally perfect in preventing the sudden escape of gas and thin feces.

Gerster states that practically all of these methods of union result in primary or secondary stricture, which is from the character of the surrounding tissue. Most frequently it was found that so much bowel had been removed that a sacral anus was necessary. When an artificial anus is determined on, Witzel, Wilms and Rydygier recommended the division of the glutinus maximus, made at one side of the sacral incision and the suture of the bowel end to a skin incision, thus gaining muscular compression. Gersuny rotated or twisted the bowel sufficiently to close its lumen and sutured. Still, in spite of all methods, only approximately 15 per cent. of these patients secure anything like a controllable anus. The incontinence which ensues is not comparable to those cases of torn or paralyzed sphincter or sacral fistula, as such cases still have the seventeen-inch loop of sigmoid in the pelvis—whose value as a fecal container was *pointed out by Wyeth—with the natural constriction* at the top of the rectum to control the fecal current. Yet such cases presenting themselves for relief are often considered as bettered by an inguinal colostomy. The local recurrence, which is so frequent, often causes such a degree of obstruction as to require a later colostomy, a condition which we met in three cases. The direct channel of the colon from the splenic flexure to the outlet leaves *no space for a fecal container and renders* closure a question of hydrostatics in these operations.

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* Read at the twelfth annual meeting of the Western Surgical and Gynecological Association, held at St. Joseph, Mo., December 29 and 30, 1902.

The last decade has seen an advance in methods derived from an analysis of the mortality and failures in the past, and the gain has resulted in the present thoroughness of surgery, and asepsis for antisepsis. The block removal of the rectum and glands where possible from below and in high location of the cancer, the combined abdominal and perineal method of removing rectum, glands and all malignant tissue *en masse,* is the new surgery for cancer of this region. This method is merely the application of principles of the general surgery of cancer, regardless of location, as exemplified by Halsted's *operation for the removal of cancer of the* breast. It is probable that the removal of cancer of the rectum in the past compares well with the removal of cancer of the breast before the radical operations were made on the lymphatic system, with the exception of the former being in a more septic region. The combined abdominal and perineal method is now advocated for high rectal carcinoma by the pioneers in rectal surgery, Kocher, Kraske, Gaudier, Quenu, Trendelenberg, Abbe, Weir and numerous others.

Cancer in the young is much more serious than in the old, both as to rapidity of growth and early involvement of the glands, although it is frequent that the glands *are only involved late in the disease.* The average life with cancer of the rectum is given as from one to two years; this may be true in the young, but in the old, if we approximate the commencement, it must often exceed double this length of time.

Allingham considers the removal of cancer, in patients under 45 years of age, as unfavorable; between 45 and 60 years, as more favorable, and over 60 years, still more hopeful. Statistics change from year to year with the ability of the operator, whose judgment increases from his mistakes and failures, and whose ability to select a justifiable operation for rectal cancer, according to the extent, location, fixation, glandular involvement, cachexia and age, *or invasion of neighboring organs,* such as vagina, uterus, prostate or bladder, becomes more and more reliable. Therefore, statistics mean more to the surgeon who makes them than to any one else. Kraske's mortality in the first ten cases was 40 per cent.; this he has now reduced to less than 10 per cent. The average mortality is still somewhere between 15 and 18 per cent. Hochenegg, in 121 sacral operations, had 5 per cent. mortality and 25 per cent. cures.

Kroenlein (Zurich) answers three questions: mortality of operation, *recurrence, and functional disability;* 881 cases show that the sovereign method is extirpation, 80 per cent. survive, 14 per cent. are lasting.

The functional result is best when possible to preserve the anus and sphincter. In the discussion Kraske expressed satisfaction in his 120 cases of sacral method, but thinks the combined abdominal sacral method more radical. Gaudier of Lille begins with a laparotomy, and by section *of the bowel at the iliac fossa* makes an inguinal anus. The peritoneum is cut from the sides of the rectum and below and the rectum forced down by blunt dissection as far as possible, the peritoneum closed and the operation completed from the perineum. Gaudier claims the method is of aid in: first, complete extirpation of the cancer; second, removal of lymphatics; *third, the possibility of complete asepsis;* fourth, no bony mutilation; fifth, the artificial anus is more supportable and more easily supervised than in the sacral region.

Quenu separates the cancer by sacral operation first, then, if necessary, makes an abdominal incision and inguinal colostomy. Chalat of Toulouse practically performs Gaudier's operations.

In our own work we were compelled some two years *ago, by the necessities of two cases, to operate from the* abdomen in one and from the abdomen and perineum in the other. During the past year we have operated on four cases in which the combined operation was planned previously. The operation, as described by Gaudier, we *modified in regard to the colostomy. Through a median* opening the sigmoid is double clamped and cut at a point as low as possible, yet well above the cancer, then *invert the mucous membrane and close both ends with a* purse-string suture. This renders the remainder of the operation aseptic. The superior hemorrhoidal artery is ligated and the proximal sigmoid segment is loosened and brought through a McBurney gridiron incision in *the iliac fossa. This incision is peculiar in the skin* incision, being at a distance of one and one-half inches to one side of the muscle separation. The end of the bowel is brought out and sutured to the skin incision; also a few sutures unite the bowel to the peritoneum at *the point of exit. This preserves the loop of sigmoid as* a fecal container. Prolapse is prevented by sutures from within, the muscle separation and sigmoid curve of outlet with skin covering for compression give a fairly controllable anus at a position where the patient is enabled *to give it proper attention.* If the median incision discloses an inoperable condition, that is, inoperable from a curative standpoint, from metastasis in glands or neighboring organ involvement, an inguinal colostomy is made and the median wound closed.

Colostomy, as usually performed, has been by the lifting of a loop of sigmoid through an abdominal iliac incision. The loop is supported by one of the various *methods and the bowel is sutured to the peritoneum and* skin, forming a true funnel-shaped hernial opening in the abdominal wall; that is, skin and peritoneum in contact. There was often prolapse following late after operation, to avoid which the loop of sigmoid was caught *up at such a point* as to render the descending colon under slight tension in the wound, thus rendering the *closure of the outlet a question of pressure against a descending flow.* The best operation is that of Mixtere, in which the sigmoid loop is drawn through a McBurney *gridiron incision,* and a rectangular skin flap pedicle attached at one end is drawn through an opening in the sigmoid mesentery. The skin flap is sutured back to place at the free end and sutures applied to the bowel, peritoneum and skin. When the loop of bowel is cut *through, this skin covering* of the bowel acts as a valve when compressed by a pad.

To sum up the main objections of the past, we have:

1. Ineffectual removal with local recurrence so common in the perineal type.
2. The extensive mutilating character of the Kraske before operative conditions were known.
3. The frequent *failure of all methods* of union of proximal and distal portions of the bowel, which, when united and anus saved, *with the destruction of the levator ani* and internal sphincter, represented but one-third of the controlling apparatus of the bowel.

4. The frequent formation of stricture either cicatricial or cancerous following operation necessitating inguinal colostomy.

5. The straightening and tension of the sigmoid destroyed it as a fecal container.

6. That sentiment and not chance has proven the main reason for continuing to place an uncontrollable anus in a comparatively inaccessible situation.

The gain in the combined operation has been in a selection of the operation to the case, either radical removal *en masse,* with all glands, fat and connective tissue or a colostomy for palliation. The retention of the sigmoid as a fecal container and the peculiar formation of the anus, giving a fair degree of control in an accessible situation.

SOME REMARKS ON SCLEREMA NEONATORUM,

WITH REPORT OF A CASE WITH AUTOPSY.

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Sclerema neonatorum is a rare disease. Up to the present time I have been able to find but seven cases reported in America, and a careful review of the literature of Europe affords but comparatively few examples of the strange condition. The obscurity of the etiology of the malady and the scarcity of clinical reports of cases with autopsies, as well as the meager and unsatisfactory descriptions of the same found in most text-books, render doubly interesting the report of a typical case, and afford an excuse for a perhaps too lengthy description of the clinical picture of the disease.

Uzembezius, a physician of Ulm, in a work entitled an "Ephemeris of Natural Curiosities," published nearly two centuries ago, described an infant, born at term, which from top to toe became rigid and cold, resembling a piece of flesh dried by fire. This is regarded as the first recorded case of infantile sclerema, and it was at that time ascribed to maternal impressions, since the mother of the baby had spent much time in the churches, worshipping the images and statues found there.

To Underwood, however, an English physician, belongs the credit of having first recognized and described the disease, a description, too, so vivid and so true as to have left little to be added or to be taken away. His observations were particularly noted in France, and the condition most thoroughly studied there, although for many years it was confounded with a very similar condition, edema neonatorum. This disease presents many features in common with sclerema, but differs in so many respects as to leave little doubt that they are essentially separate and distinct. Andry (1781), Leger (1825), Billard (1839), Villaix (1849), all recognized, studied and described the malady and developed many and ingenious theories to account for it. It remained for Parrot, however, the brilliant Parisian pediatrist, to establish the fact that sclerema neonatorum was a distinct clinical entity, although the conclusions of this observer have been somewhat modified by the studies of more recent years.

The subjects of this disease are usually found among the premature, weakened, poorly-developed infants of the foundling asylums. Cases occurring in private practice are exceptionally rare, although Parrot cites cases developing in well-nourished, robust and well-fed infants. Whether or not hereditary syphilis plays a rôle in the etiology is still a disputed point. Cases have been reported in which improvement or even recovery has followed treatment by mercurial inunction, but there is room for much skepticism as to the correct diagnosis in such instances. Within the past decade attempts have been made to isolate specific bacteria and to demonstrate that they were responsible for the development of the disease, but the number of observations in this direction is as yet too few for any definite conclusions to be deduced.

The affection, which is characterized by an induration of the skin and subcutaneous tissues, does not, as a rule, develop immediately after birth, but the symptoms are first noticed within the following seven to ten days, although according to Hennig they may be delayed as late as the seventh month. It is doubtful, however, whether such late developing cases should be regarded as instances of genuine sclerema neonatorum, but that they should rather be classed with scleroderma. In the first place, they do not correspond clinically with sclerema, they more frequently end in recovery and show a tendency for the induration to occur in isolated areas. It seems reasonable, therefore, to consider those cases which develop late as scleroderma infantorum corresponding to scleroderma adultorum, than to regard them as instances of true sclerema neonatorum as described by Underwood.

The symptoms may develop suddenly with no particular warning, may follow or complicate an acute disease, such as pneumonia, or they may be preceded by a variety of indefinite signs of general disturbance, such as vomiting, diarrhea with greenish stools, obstipation, convulsions, etc. The infant may become thin and emaciated, the eyes sinking into the orbits, the skin of the face taking on a sallow tint, becoming wrinkled, wizened, like the face of a little old man; or the disease may appear so suddenly that when first seen the characteristic induration may be the first and foremost symptom to which our attention is directed.

With such an onset the changes in the skin, which represent the essential feature of the disease, develop. In the invaded region the skin becomes swollen, shiny, losing its normal folds, appearing as if under tension, very like edema, but harder, firmer, showing little or no evidence of pitting on pressure. The elasticity and suppleness of the skin are gone; it is no longer possible to pinch it up into folds by the fingers; it is cold, clammy, greasy to the feel, for all the world like the outside rind of a ham. It is hard, as if glued down to the subcutaneous tissues; it is impossible to slide skin over subcutaneous parts, skin, muscle and underlying bone appearing to be fused completely together.

The color of the invaded areas varies from a dirty yellowish jaundice-like color to a livid blue black, the tints being comparable to the array of colors afforded by an area of ecchymosis slowly absorbed. The temperature of the part is always much reduced.

The amount of surface of skin involved varies within wide limits in different cases. It may remain circumscribed, death occurring to effectually check the progress of the disease. Again the skin of the lower extremities and trunk may be alone affected, or the whole surface of the body may take part in the process. The part which first shows the thickening may also vary. Most often the skin of the buttocks or thighs appears to be earliest diseased, from there spreading upwards and downwards on the trunk and on the lower extremities. It may then become general over the whole surface of the body. On the other hand, the skin of the face may be the first point to show the induration, more particularly in the region of the cheeks.

As a consequence of the thickening and hardening of the skin and subcutaneous tissues, the affected parts become stiff and inflexible. If the face be involved, the mouth and cheeks are set as if moulded, mask-like, resembling the face of a doll, crying, sucking, swallowing being alike impossible. If the limbs be attacked the members are swollen, blue black to dirty brownish yellow in color, hard and rigid, extended or slightly flexed, but stiff and immovable. When the disease becomes general the infant lies motionless, with or without very feeble cry, as stiff as and still as death, with scarcely any respiratory movement and with an ever-weakening pulse. At this stage of the disease Trousseau and Parrot were able to lift the body by catching hold at either end, as one would raise a stick of wood, and it has been possible to balance the body on the radial surface of the hand placed under the back, just as one would balance a figure of marble or of metal.

Such, in short, are the characteristic symptoms of sclerema neonatorum. Variations in intensity and in extent of the induration occur, but correspond in general to the above description. In striking contrast, however, to this is the absence of general manifestations of disease of any of the vital organs. No heart or lung disease, no disease of the nervous system or gastrointestinal tract has ever been found that might be considered constant in or in any way causative of sclerema. There seems rather to be a universal prostration of all the vital functions. The malady runs its course slowly but fatally without giving the slightest clue in regard to the primary cause of the trouble. In the skin itself where the morbid process is mainly localized, there occur no microscopic changes that can be regarded as peculiar to or characteristic of the malady. Atelectasis of the lungs, congenital defects of the heart and morbid processes in the digestive tract have been described, but must be regarded rather as accidental complications than as having anything to do with causing the disease. Money described two cases complicated with paralysis, and concludes that the disease may be a trophic disturbance. Numerous hypotheses have been advanced to explain the peculiar clinical changes, but we must admit that from a practical standpoint we know little or nothing of their etiology, being able neither to retard nor to arrest its advance. Recovery rarely if ever occurs, the infant after illness of a few days to a week or more dying from the extreme prostration or asthenia.

Turning now from a general survey of sclerema, the history of a particular case may prove interesting.

J. K., full term infant of healthy parents, male, seven days old, at birth was quite cyanosed; extremities, ears, lips, face all were blue and livid, presenting the characteristic appearance of a "blue baby." Careful auscultation of cardiac area, however, discovered no audible murmur. Condition lasted forty-eight hours and gradually disappeared, leaving no trace. Baby nursed, bowels moved and urine voided in an apparently normal manner.

During night of seventh day baby cried almost incessantly and with no apparent cause, bowels moving and urine being evacuated as usual.

Examination.—The following morning the following facts were disclosed: The baby refused to nurse and seemed generally tender to the touch. Penis swollen and infiltrated with hard edema, so much so as to effectually close preputial opening. Skin of same was glossy, shiny and did not pit on pressure. Skin of scrotum was also swollen, hard and board-like, shiny and cold. Questioning revealed the fact that the little patient had not urinated since the night before. Percussion over hypogastrium revealed dulness and with a view to relieving the bladder a hasty circumcision was done and an unsuccessful attempt made to pass a catheter. Under a hot bath and warm fomentations, however, the bladder relieved itself, but nevertheless the hard, board-like infiltration continued and was rapidly spreading. The cord had not yet separated from the umbilicus, but there was no evidence of infection or inflammation in its neighborhood. Temperature per rectum 98.5 F.

On the following day the hard induration was still present and had spread upward on the trunk and downward on the legs. The least touch seemed very painful, causing the baby to cry for some time, whereas otherwise he was quiet. Bowels moved sluggishly and small in amount, greenish in color; urine also small in amount, stained diaper light yellow. It was impossible to obtain any for examination. Temperature 97. At this time a blood examination showed 6,000,000 erythrocytes per c.mm., with no deformity of same and no nucleated reds. Owing to difficulty in obtaining blood it was impossible to count white cells; but from study of ordinary smears they appeared to be less than normal in numbers and mostly of mononuclear type. Cultures taken from the blood were negative.

The next day the sclerema had spread over the whole of the extremities and midway up the trunk. Skin was hard and leathery, could not be pinched up into folds, was densely adherent to subjacent, all seeming to be fused indefinitely together.

The following day, the fourth of the illness, the conditions were much worse. The infiltrated areas were turned a deep bluish black, particularly the dependent parts, and were painful on least pressure. Bowels moved and urine voided, but very scanty in amount. Child refused to take any but slight amount of nourishment by a spoon. Legs were flexed at about an angle of forty-five degrees, were stiff and firm, impossible to straighten or bend. Sclerema had extended on chest, but arms and face were not involved. Temperature 96, rectum. Death the same afternoon.

Autopsy.—This was made the following day at 9 a. m., fourteen hours after death. It is important, especially on account of the negative results. The following changes were noted. Body slightly emaciated. Postmortem rigidity not well marked. Surface of body presents a mottled bluish-black to yellowish tint, the former color being most developed over dependent parts and on skin of extremities. Skin of legs, thighs, feet, scrotum, penis, pelvic regions, extending behind up to middle of back and in front midway to umbilicus, is swollen hard, board-like, stiff, glossy, not pitting on pressure. Skin can not be pinched up into folds by the fingers, neither will skin glide over subjacent tissues. The dark blue-black color is most developed in region of anus and penis, the circumcision wound of which appears gangrenous. Umbilical cord separated and stump is normal looking with no signs of inflammatory reaction about it.

On section, subcutaneous fat exceedingly small in amount. Skin of lower abdomen distinctly thickened, being three times the thickness of that of upper abdomen. On section it appeared very firm and fibrous, of mottled orange to lemon yellow to grayish color, subcutaneous fat showing a distinct reddish tinge. No serum exuded from cut surface. Heart and lungs normal with no sign of any congenital defect. Liver mahogany color, extending four cm. below free border of ribs with no macroscopic change. Gall bladder distended with thick tenacious black bile, which could not be squeezed into duodenum, although dissection of common duct disclosed no obstruction. Stomach distended with gas extending below to umbilicus and 1½ cm. to right of median line. Urinary tract normal; spleen normal. Mucous membrane of small and large intestine pink, soft and velvety with no signs of swollen follicles or of ulceration.

Such in short, were the results of the postmortem examination. Cultures were taken from the heart, spleen and peritoneum, but there occurred but a few colonies of *Staphylococcus albus* and variety of the color bacillus. That the presence of these organisms was accidental and not due to general infection I feel convinced, because of the lack of any symptoms pointing to an infective process such as fever, with enlarged spleen. Microscopic examination of tissues revealed no change. In the skin, however, corresponding to the marked clinical symptoms, we should expect marked pathologic peculiarities. No change, however, has been found at all commensurate with the macroscopic appearance. Northrup reported a typical case in which the microscope revealed nothing especially abnormal. Parrot found hardening and atrophy of the skin and rete malpighii, the cells appearing indistinct and forming a fused mass. The subcutaneous fat appeared atrophied and the interstitial fibrous connective tissues increased. The blood vessels were shrunken. In the present case the corium seemed thickened, the cells and fibers composing it having a homogeneous granular, hazy appearance, suggestive of cloudy swelling. The subcutaneous fat appeared normal, the interstitial fibrous tissue being little if at all increased.

Ballantyne found a "dried-out skin," some thickening of the layers with some diminution of the subcutaneous fat. The pathology and the etiology are very obscure. What relation these slight skin changes bear to the profound prostration of the disease is difficult to explain. Henoch examined the nervous system from two cases and found nothing abnormal.

From the date of its first description many and ingenious theories have been advanced to explain its occurrence. Underwood believed it was due to a spasm of the skin in consequence of breathing bad air. Leger thought it was due to an improper and incomplete development of the intestinal canal. Parrot taught that sclerema was not a disease, but only a symptom, an end-stage of a general condition of malnutrition, which he termed "arthrepsie," and that the thickening and drying up of the skin was due to the loss of fluids in consequence of diarrhea and to the absence of any reparative effort on the part of the other cells of the body. Langer, in 1881, advanced the theory that in consequence of the lowering of the body temperature, the palmitin and stearin, which form the principal part of the adipose tissue of infants, solidify, thus causing the thickening and hardness. This may be considered but a modification of the theory of Parrot that the reduction of temperature is consequent to the general condition of mal-nutrition and mal-assimilation, and following this heat loss solidification of the subcutaneous fat occurs. In other words, the skin changes depend purely on a chemical and physical change in the cutaneous fat, regardless of any vital activity on the part of the body cells. Were this true we might reasonably expect a like change to occur post-mortem in the case of infants. Ballantyne asserts that the skin changes are the result of the "drying out" of the skin incident to the diarrhea, and this view seems to be favored by Wiederhofer and Soltmann. This case, however, as well as that of Northrup and others, seems to prove that a preceding diarrhea is not essential to the development of the disease, nor a necessary symptom of its progress. Schmitt, in 1893, reported three cases in which he isolated micro-organism, mainly staphylococci, from the tissues, and he maintained that sclerema is due to a general infection with a definite micro-organism, but this observation has not as yet been corroborated by other observers. Pathologic evidence, on the other hand, shows no change at all comparable to the changes observed in general infection with any known organism. It may be, however, that the immature tissues of the new-born react to bacteria and their toxins differently than the mature tissue of adults with which we are more acquainted. It seems to the writer more plausible to regard the condition as the result of an autointoxication from improper functional activity of the gastrointestinal tract, the changes in the skin being secondary to the retention of the poison, and its direct action on the skin, incident to an attempt at elimination.

HYPERTROPHY OF THE SYNOVIAL FRINGES OF THE KNEE JOINT,

WITH A REPORT OF TWELVE CASES.

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This disease has been described from time to time by various writers in medical journals, but as yet there has been only slight mention of the subject in works on surgery. The different authors have included this condition in their description of floating cartilage, internal derangement of the knee-joint and chronic synovitis, but have given little consideration to it independently. In designating the disease the profession have used various terms, such as rheumatic joint, torn cartilage, strained ligaments and synovitis; and undoubtedly some cases of it have been diagnosed as tuberculosis of the joint, which it sometimes resembles in its first stages and for which it might easily be mistaken.

From the cases which have come under my observation during the past year and a half I have selected twelve, typical in character, the treatment of which has extended over a sufficient length of time to allow definite conclusions to be drawn regarding them. Eight of these cases I operated on; the remaining four were treated by mechanical means. The unsatisfactory nature of the information contained in the text-books has led me to endeavor to formulate my own experience and its results.

ETIOLOGY.

The etiology is obscure. In a few of the cases traumatism plays an important part, while in others it has been impossible to associate injury with the beginning of the disease. In order to explain this condition in those cases where it is not traceable to injury, the complicated movements of the normal knee and the intricate distribution of the synovial membrane should be considered.

The knee-joint, like all diarthrodial joints, is lined with a synovial membrane, except where the articular cartilages are in contact. Here no membrane is found, except at the edge of the cartilage, which the membrane overlaps for two or three millimeters before merging into the cartilaginous structure. The inner surface presents a smooth shining appearance, interrupted (especially where the membrane folds to pass from one surface to another) by the synovial fringes, which are villous structures of varying size and length, somewhat resembling intestinal villi, the largest being perhaps one centimeter long. They are richly supplied with blood vessels, each villus containing a convoluted twig of an artery. Some of the fringes are, however, merely hernia-like protrusions into the joint of small masses of fat covered by membrane, which fill up unoccupied spaces.

The articulation between each condyle and the opposed almost flat surface of the tibia does not exactly form a hinge-joint, though strongly resembling one; and extension and flexion, the movements of which it is capable, are produced by a combination of gliding, rolling and rotation. In the movement of extension the condyles move parallel to one another, both gliding and rolling, until extension is nearly completed; and then the anterior part of the rolling surface of the external condyle having already come into full contact with the tibia, the femur is rotated inward on the tibia and the joint is fully extended. In the erect attitude the knee-joint, like the hip, is in a great measure maintained in the fully extended position without muscular effort; but there is some difference of opinion as to the manner in which this is effected.

Langer and Humphrey hold that the line of gravity of the body falls in front of the axis of movement of the knee-joint, and the tendency is thus to over-extension, which is resisted by all the ligaments of the articulation. If this view be correct, any strain produced, for instance, by overweight, long standing in one attitude or injury, would cause the knee to overextend, stretching the ligaments and allowing the joint, when moved, to deviate from its normal position. With this condition it is almost impossible for the fringes to escape being pinched, so complicated are the movements.

On the other hand, Meyer maintains that the line of gravity falls slightly behind the axis of movement, and that the stability of the joint depends mainly on the association of rotation with the beginning of flexion; for while the femur is prevented from rotating outward by the ileo-femoral ligament, which in its turn is kept tense by the weight of the body acting on the hip-joint, the tibia is fixed by its connection with the foot. Rotation between the femur and the tibia being thus impossible, flexion can not take place, and the joint is fixed.

If we accept the explanation of Meyer, which has the support of the majority, a weakened condition of the arch of the foot would have the same tendency to stretch the ligaments of the knee by preventing fixation of the tibia.

It seems to me that the latter condition would explain many cases, as a weak pronated foot is very closely associated with this disease; and while I have not found it in all cases, it has been present in many, and the use of a plate to support the arch has been of great service in remedying the trouble in the knee-joint. In those cases attributed to trauma it may result from a sudden wrench with the joint in an unfavorable position; or pressure of the joint against some hard surface daily may cause a thickening of the tissues just posterior to the patella tendon. This thickening pushes back the fringes into the joint between the surfaces of bone where they become pinched, and the joint motion causes a continuation of the pathological process.

PATHOLOGY.

Pathologically the disease consists in a nodular enlargement of the synovial fringes which project into the joint, with more or less thickening of the membrane. In the commencement of the disease only a slight increase of vascularity and a tendency to thickening of the fringes is noticeable. The membrane is slightly red around the base of the villi and the fluid which is occasionally present is insignificant in amount and ordinarily yellowish in color. This condition is followed by an increased hypertrophy of the synovial fringes, which varies from a slight and almost imperceptible hyperplasia to a condition where the fringes resemble a small bunch of half-grown grapes.

The synovial membrane begins to encroach on the cartilages. Normally it runs into the cartilaginous border for two or three millimeters, but now the hypertrophied membrane sends out processes which creep in still farther. The fluid increases in amount in a few cases, but in the majority it is absent. Microscopically the fringes show marked dilatation and branching of the vessels, and a large increase in the amount of connective tissue which is rich in cells. It is impossible to obtain growths in culture tubes, and no trace of bacteria can be found with the microscope.

SYMPTOMS.

The first symptom noticed by the patient is generally some difficulty in walking. Often on extending the leg he feels a slight pain, or he may be seized with sudden pain and fall on his knees. In some cases where the fringe is pinched the injury to the membrane is so extensive that an acute attack of synovitis occurs, and the patient is obliged to remain quiet some weeks. With rest the joint soon resumes its former condition with, however, a slight increase in the size of the fringes. In other cases the process is more gradual without any acute symptoms.

This condition continually grows worse, until there is partial or complete loss of function of the joint, and the patient is sometimes obliged to resort to crutches. In some cases inability to extend the leg appears, and the quadriceps extensor muscle atrophies. The patient complains of a sense of insecurity of the joint, and rarely a dull pain is present on motion.

Examination shows a slight bulging of the thickened membrane on either side of the patella tendon, generally more marked on the inner side. A little higher up the small portions of the membrane can easily be felt under the finger. The joint shows no redness or heat, except in acute attacks, and on motion there is absence of grating. Measurements seldom show much enlargement, and movement can be carried beyond the usual limit. The ligaments are lax, and some lateral motion is present.

TREATMENT.

The treatment of these cases is mechanical and operative. And early diagnosis is very important, as it is at this time that much can be accomplished by conservative methods. As the disease is probably due to a small portion of the fringe being caught between the surfaces of bone, resulting undoubtedly in most cases from a strain of the ligaments, which allow of too free motion of the joint, attention should first be given to ascertaining the cause.

Mechanical Treatment.—The mechanical treatment, therefore, consists first in correcting any condition that may exist which tends to strain the muscles and ligaments of the joint. In my hands the use of hot air applied at least every other day has seemed to be very beneficial. Strapping with adhesive plaster has also been of assistance, not only because of the pressure which it exerts on the membrane, but also because it limits the joint motion.

In those cases where flatfoot is present a plate will aid much in bringing the joint surfaces into a normal position, and by fixing the foot the knee is made more stable. A brace which limits movement will be found useful in cases where the ligaments are lax, as it lessens lateral motion and prevents the leg from hyper-extending. Keeping the joint at rest for a long period by encasing the limb in some fixed dressing, such as plaster of paris, has proved worthless in my experience, as it is impossible to exert any appreciable influence on the hypertrophied fringes by simply fixing the joint.

Operative Treatment.—Many of these cases have progressed to such an extent that conservative treatment

Recovery was uninterrupted, and the patient returned to his home February 19, motion being nearly normal. A plate was made for the left foot and apparently was a great help in the after-treatment. A subsequent examination shows no tendency in the disease to return, and the gait is normal.

Case 6.—W. A., man, aged 29, engineer by occupation. The patient had been well until two and a half years before. While stepping from a cab one night he was seized with a sudden pain in the right knee. The following morning the joint was swollen and painful, but with rest these symptoms subsided in a few days. Some months after this he noticed when walking that the leg suddenly flexed and, in placing the foot, he was obliged to use care to avoid falling.

He was seen by me for the first time March 26, 1901, and examination showed a very lax joint, with small masses around the patella. The right foot was flat, with marked tenderness under the heel. There was so little thickening around the knee joint that an operation was not advised Hot air treatment, combined with adhesive strapping, was begun, an arch was placed under the foot, and an immediate improvement was noticed. At the end of three months it was impossible to detect any thickening around the knee, and the joint was apparently in a normal condition.

Case 7.—E. B., woman, aged 34. First seen by me April 17, and gave the following history:

For the previous year she had experienced some discomfort in the right knee on getting up from the floor. This condition gradually grew worse, until there was considerable difficulty in walking and climbing stairs. Extension of the leg caused a darting pain at times, and there was a sense of insecurity about the joint.

Some two weeks previous to this the patient, after a long drive, found the knee so painful and swollen that she was unable to use it, and was obliged to have assistance to alight from her carriage. The family physician was called, and found some swelling and redness. Hot packs were used, followed by strapping, and she was not allowed to walk. Examination showed a small amount of fluid and marked hypertrophy of the synovial fringes. The arches of both feet were flattened with some tenderness.

As the patient was going out of town for the summer, continued strapping with adhesive plaster and plates for the broken arches was advised. She returned in the fall, and in consultation with the family physician I advised an operation. This suggestion, however, was not adopted, and the hot-air treatment and strapping commenced. Treatment was continued for some ten months with improvement, and at the present time the joint is in a very good condition and gives no trouble whatever.

Case 8—R. W., woman, 37 years of age; first seen by me June 5, 1901. For the previous four years her left knee had been swollen and painful at times. Had often fallen when stepping from her carriage, and during the past year had not been able to raise the foot from the floor when sitting; had been obliged, when walking, to swing the whole limb to prevent the leg from flexing. Examination showed slight effusion with marked hypertrophy of the synovial fringes. The patient was unable to extend the leg by muscular effort, and there was much atrophy of the thigh. The arch of the foot in this case was also flattened.

Operation was advised, as any other form of treatment seemed hopeless. A large quantity of tissue was removed from the joint, after which it was irrigated and placed in plaster. In two weeks' time motion was commenced. The patient made a good recovery, and in three months' time was able to extend the leg at will. There has been no return of symptoms, and the patient walks as well as formerly.

Case 9.—E. J., woman, 23 years of age. First seen by me Aug. 13, 1901. About two years before patient noticed some difficulty in left knee when playing tennis. Sudden movements were painful, and at times fixation of the joint was impossible. This condition grew gradually worse, and the patient repeatedly fell when walking. A knee-cap was worn for a while, but gave only temporary relief. Examination showed very lax ligaments, and motion in all directions was more than normal. The joint was somewhat enlarged, and small masses could be felt all over the anterior surface of the knee.

An operation was advised, but was delayed until the following November. Extensive disease of the fringes was found and a considerable quantity removed. The leg was placed in plaster for two weeks, after which motion was commenced.

The case did well until the fourth week, when sciatica of a violent type complicated matters, and I was obliged to place the leg at rest for some time. Firm adhesions formed, which were subsequently broken. This was followed by a renewal of the sciatica, and I was again obliged to put the leg at rest. Since that time the leg has been worked gently, and motion to a right angle obtained. The joint continues to improve, and undoubtedly full flexion will eventually be attained.

Case 10.—M. F., man, aged 26. First seen by me Oct. 16, 1901, at the Maine General Hospital in consultation with Dr. Brock. In December, 1900, patient fell from a horse, injuring his knee. This was followed by swelling and pain, which lasted some weeks. After recovery from the fall he was able to walk, but the joint remained weak, and was very unstable. Some months later this condition became aggravated and the leg would flex on the thigh when the patient was walking, causing him to fall He was finally obliged to use crutches.

Examination showed a small effusion into the joint, and small bodies could be felt there. The synovial membrane was thickened around the patella, and the ligaments were very lax, allowing much lateral motion. An operation was advised, and was performed the following day. All the fringes were removed and the limb placed in a fixed dressing.

Motion was not commenced until November 16, when ether was given and the adhesions broken. The patient made a good recovery, and was discharged November 26. At the present time he has good use of the joint and is apparently well.

Case 11.—H. W., a woman, 26 years of age; seen for the first time Nov. 24, 1901. About four years previous to this time the patient noticed slight soreness around the left knee after walking. The difficulty was so slight that it received no particular attention until the following year, when she consulted a physician, who advised anti-rheumatics and a knee-cap, from which she seemed to get some relief.

About two years ago she had a fall, striking on the knee. This was followed by an acute attack of synovitis, from which she soon recovered. Since then the patient has had repeated attacks of acute inflammation. Examination showed some thickening around the patella, with very little fluid in the joint. The ligaments were very lax, allowing considerable lateral motion

As pain had been quite a prominent symptom, an *x*-ray picture was made, which showed the bones to be in a normal condition. The family history was negative. An operation was advised. The fringes were found to be much enlarged, and a considerable amount of membrane was removed. The joint was irrigated, and a small elliptical piece of the ligament was removed on each side of the patella.

The patient made a good recovery. Motion was begun at the end of the second week, and complete flexion was attained at the end of two months. At the present time there is no difficulty in walking, and she can use the knee with as much ease as the other.

Case 12.—J. M., man, 33 years of age. First seen by me Dec. 12, 1901. Family history good. About two years previous to this time he noticed a tender spot under the right heel, which caused considerable pain to him when walking. A short time after this the right knee suddenly gave way under him while walking, and he was confined to his bed for two weeks with acute synovitis. There was a repetition of attacks until his condition became so serious that he was obliged to use crutches.

Examination showed marked thickening around the joint, with numerous masses which slipped from under the finger.

There was inability to extend the leg, and much atrophy of the thigh The arch of the right foot was flattened and painful.

An operation was advised and was performed the following week. The fringes were found much enlarged, and a considerable amount was removed. There was a good deal of swelling following the operation, but this rapidly subsided. Recovery was good, the patient is now able to walk without aid, and motion is normal.

CONCLUSIONS.

From my observations it seems to me that such cases should be considered independently, and not included among the other diseases of the knee-joint. A thorough microscopic examination of the tissue which was removed shows it to be a simple inflammatory tissue, and not due to any micro-organism. While the etiology is obscure, it evidently is due to some fault in the weight-bearing structures of the lower extremity, which causes the ligaments of the joint to become lax.

In all the cases which I have examined since the matter was brought to my notice a flattened arch has preceded the knee-joint trouble, and the use of a plate has been of great service in treating the disease. The matter of diagnosis is not difficult, although a torn cartilage somewhat resembles this condition. Examination of the cartilages was made in all the cases where operations were performed, and in all they were found intact.

It has been impossible to account for the paralysis of the quadriceps extensor muscle, which I found in three instances; but in several of the cases operated on, where it did not exist before the operation, I have found a similar condition afterwards, which was the last symptom to disappear. This shows that sometimes this condition does occur when there is very little to cause it. The question whether a case should be treated by mechanical methods, or whether it should be operated on, is a matter which must be left to the judgment of the surgeon; as some cases which seem doubtful yield easily, while others which are apparently slight will not improve until the fringes are removed.

THE USE OF A MYDRIATIC AFTER THE AGE OF FORTY-FIVE.

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(Concluded from p. 1078.)

THE THEORY AND PRACTICE OF PROMINENT OPHTHALMOLOGISTS.

In the letters sent out the following questions were asked:

1. What is your practice in regard to the use of mydriatics or cycloplegics in refraction work in patients beyond 45 years?

2. If they are used frequently, what advantages and what disadvantages or dangers, if any, do you find in such use?

3. If they are used infrequently or not at all is their omission due to disbelief in their utility or to fear of bad effect?

4. Is the belief in these advantages and disadvantages theoretical or the result of your own experience?

5. Can you cite cases in your own practice in which glaucoma has seemed to be caused or aggravated by the use of these drugs?

Ninety of the 100 to whom letters were sent replied. These replies are classified as well as may be according to the answers to the first question. Three classes are made: First, those who do not use them at all; second, those who use them rarely, and third, those who use them frequently. From the answers received a strict classification under these heads is impossible, for it is doubtful if a few of those put down as never using them do not on rare occasions employ them, and some of those noted as rarely using them may actually use them oftener than some of those who are noted as frequent users.

Classified in this way it is found that of the 90 replying 22 never use cycloplegics or mydriatics for refraction work after the age of 45, 32 use them rarely and 36 use them frequently. Of the first, 2 have used them repeatedly for experiment and have discontinued such use because they find they secure equally good results without them. Of the latter, 17 use them in a majority of cases at first examination. Where it is possible the ideas expressed by the answers are incorporated in the table of replies, but in some cases longer extracts are given below.

There is a very commonly expressed fear of glaucoma resulting from the use of these agents, but 25 state that they have no fear of producing increased tension in any case where there is not already the commencement of the glaucomatous process. Thirty-four have seen glaucoma caused or aggravated in their own practice and 11 have seen such cases in the practice of others, while 41 have seen no such cases. Thirty-six cases of glaucoma either produced or aggravated are mentioned. Some of these are reported most thoroughly and carefully. (The author regrets that the length of this paper will not permit them to be incorporated in full just as reported.)

QUOTATIONS FROM REPLIES RECEIVED.

9. W. R. FRINGER: I should use a cycloplegic in a patient over 45 if I thought it indicated in that particular case, providing there was no indication that the patient was predisposed to glaucoma.

11. H. GRADLE: I know of no justification for the use of a cycloplegic for the determination of refraction after the fortieth year of life, and consider it improper. Whenever I use a mydriatic to permit ophthalmoscopic examination of elderly people on account of narrow pupil I usually follow it by eserin until the pupil is normal, except when the eye is distinctly a soft one.

12. E. E. HOLT: It seems to me that oculists should advocate the use of mydriatics for the treatment of the eyes, to give rest, quiet spasms and reduce inflammation, not for refraction work, for the state of refraction can be obtained without mydriatics.

By mistake of a nurse I once had a solution of scopolamin (1/5 per cent.) put into the eyes of a person suffering from a subacute attack of glaucoma, but it seemed to do no harm, and the patient made a good recovery. In cases of a mixed character, when iritis and glaucoma exist together, I have sometimes thought that mydriatics made the eye worse, but I do not recall a case of glaucoma as due to the use of mydriatics alone.

16. J. M. RAY: I have time and again used the drops and have found that I can measure the refraction and give my patients satisfaction without putting them to the inconvenience and annoyance that drops entail. In fact, I find that the more experience I have in refraction work the less inclined I am to use a mydriatic; rarely do I find it necessary in a patient over 40. Careful testing, ophthalmometric measurements, shadow test and ophthalmoscope, followed by a second examination with trial lenses, have proven in my experience all that is necessary except in young people.

21. CASEY WOOD: I do not use cycloplegics for determining the refraction in persons over 45 years of age, because I have repeatedly found exactly the same results with the methods I employ (ophthalmometer, skiascopy with euphthalmin and cocain and test lenses) as with the strongest cycloplegics.

TABLE OF ANSWERS.

	First Question.	Second Question.	Third Question.	Fourth Question.	Fifth Question.
1. A. N. Alling.	"Almost without exception they are *unwarranted* and *unnecessary*."	....	"Principally former."	....	"No, because I am careful."
2. W. C. Bane.	Not used.	....	"Not used because I have not felt the need."	....	"None when used in refraction work."
3. Chas. H. Beard.	"I omit them absolutely."	....	"To both."	"The result of my experience."	A case of hemorrhagic glaucoma.
4. D. C. Bryant.	"Do not use any mydriatics in patients beyond 45."	....	"Consider them useless except in the rarest of rare cases."	"Result of experience."	"Yes; have seen several cases greatly aggravated. Atropin not used by me."
5. W. L. Dayton.	Never cycloplegic, sometimes mydriatic.	Have not feared bad results.	Both.	Theory only.	Had cases where atropin used for disease increased tension.
6. A. J. Erwin.	Not used after age of 30.	No danger.	"Not used with adults because useless, there being no latent condition that will bear correction."	Observation.	None in my own practice; several cases caused by others.
7. Geo. F. Fiske.	"Seldom use them."	....	"Disbelief in their necessity."	Both.	No.
8. Harry Friedenwald.	"Rarely, if ever."	....	"To both." Risk greater than advantage.	....	Caused, no.
9. W. R. Fringer.	"Never used."	....	"Not thought them indicated."	Theoretical.	No.
10. E. J. Gardiner.	Very seldom; do not recall single case.	"Think them superfluous."	Both.	Theoretical.	No.
11. H. Gradle.	"I know of no justification for the use of a cycloplegic."	....	"A skilful observer does not require them."	....	No.
12. E. E. Holt.	"Never use them for refraction work."	....	Had one case of paralysis of acc. following 1 per cent. atropin solution.	Theoretical.	No. In one case of glaucoma atropin used by mistake without bad effect.
13. Lucien Howe.	"Not ordinarily."	....	"Fear of bad effects."	Both.	Apparently one instance.
14. L. J. Leutenbach.	"Do not use them."	....	"Mainly the latter."	Experience.	Four cases observed.
15. W. T. Montgomery.	Cycloplegic not used in ten years.	....	Both.	Experience.	Several of both.
16. J. M. Ray.	Never use them.	....	Disbelief in utility, not fear of bad effects.	Experience.	
17. Dunbar Roy.	Never found them necessary after 45.	....	....	Experience.	No.
18. Miles Standish.	"As a rule, I do not use them."	....	"Fear of harm."	"Experience."	"I can."
19. K. K. Whelock.	Not used. Prefer to change lenses several times if necessary.	....	Both.	Both.	Have known of two cases after use of cocain.
20. Chas. H. Williams.	"I do not use them."	....	"Disbelief in their utility."	"Experience."	"No."
21. Casey A. Wood.	Mydriatics often. Cycloplegics rarely or never.	....	Disbelief in their utility only.	Experience and experiments.	Several cases where glaucoma was aggravated and others where it followed use of atropin.
22. H. V. Würdemann.	No cycloplegics; occasionally mydriatics.	....	Both; unnecessary and dangerous.	Experience.	Yes; both. (One case reported in detail.)

Twenty-two do not use cycloplegics in refraction work after the age of 45.

	First Question.	Second Question.	Third Question.	Fourth Question.	Fifth Question.
23. Frank Allport.	"Never use unless imperative."	....	Fear bad results.	Theoretical.	No.
24. S. C. Ayres.	Occasionally.	Not required frequently. Used very cautiously.	....	Experience.	Not in refraction work. In some other cases.
25. A. Barkan.	Rarely.	....	Rarely required.	Experience.	No.
26. A. E. Bulson, Jr.	"I rarely use them."	....	Both. Fear glaucoma.	"Partly both."	One case.
27. Swan M. Burnett.	"Only in exceptional cases."	....	Disbelief in utility.	Both.	Only in one or two operative cases.
28. Fleming Carrow.	Only in strong presumption of astigmatism.	....	"Not to fear of bad effects."	Experience.	One undoubted case.
29. J. W. Chamberlin.	"Seldom use them."	....	"Do not believe in the general necessity."	Both.	"I can not."
30. Wm. Cheatham.	"*Very* rarely."	....	Both.	"Mainly theoretical."	"Several in younger persons."
31. J. E. Colburn.	I use them in low astigmatism.	Greater accuracy.	Disbelief in general utility.	Experience.	No.
32. Leartus Connor.	Rarely used.	....	Disbelief in utility.	Experience.	No.
33. E. C. Ellett.	Occasionally essential in oblique as.	....	Both.	Disadvantages theoretical. Advantages experience.	No.
34. Albert B. Hale.	Rarely (?).	....	Fear of bad effects.	Theoretical.	One case of chronic glaucoma had pain increased.
35. George N. Harlan.	"Homatropin occasionally."	....	"Both."	"Both."	One case.
36. F. C. Hotz.	"Very rarely."	....	"Regular use is not of advantage."	"Found useful in few cases."	No.
37. A. E. Kegley.	Rarely.	....	"Both."	"Experience."	Four cases after use of atropin.
38. Herman Knapp.	Rarely use cycloplegics; mydriatics frequently.	....	Both.	Experience.	Yes; both.
39. Chas. W. Kollock.	"I rarely use them, but do not hesitate when they are indicated."	....	Both.	Experience.	No.
40. J. A. Lippincott.	"Quite infrequently."	....	Both.	Experience.	Yes; several cases of increased tension.
41. J. O. McReynolds.	Cycloplegia seldom. Mydriasis frequently.	....	The former.	Experience.	Increased tension in many cases.
42. W. A. Mann.	Mydriatic frequently; cycloplegic occasionally.	Advantage in retinoscopy and in estimating astigmatism.	....	Advantages practical; disadvantages theoretical.	No.
43. H. Moulton.	In exceptional cases.	....	Both.	Experience.	No.
44. Charles A. Oliver.	Seldom or never in refraction.	Advantageous in a few cases.	Disbelief in utility. No disadvantages.	Experience alone.	Not in my own practice.

	First Question.	Second and Third Questions.		Fourth Question.	Fifth Question.
45. Caspar Fischel.	Exceptionally.	...	Fear of bad effects.	Experience.	Three cases.
46. A. E. Prince.	Exceedingly useful in a few cases.	...	Fear of consequences.	Experience.	Three cases.
47. B. Alex. Randall.	Rarely in refraction. Frequently otherwise.	"No real disadvantages."	"Principally first."	"Largely theoretical."	No.
48. G. E. de Schweinitz.	Rarely find a cycloplegic necessary.	Common disadvantages of mydriasis. Do not fear bad effects.	...	Experiences.	"Yes; three." Cases cited.
49. Louis H. Taylor.	Used when necessary.	More certain of results.	Largely fear of bad effects.	Theoretical.	No. Use atropin frequently without harm.
50. J. Thorington.	Seldom.	A cycloplegic is used to put the eye at rest or decide axis of as.	...	Experience.	"One case only."
51. Flavel B. Tiffany.	Not as often as in younger people.	...	No fear of bad effects.	Experience of 25 years.	No.
52. Frank C. Todd.	A few select cases under 50.	...	Both.	Experience.	No. Have seen a number of cases.
53. J. A. White.	Rarely.	"No special advantages."	Small risk of increasing tension.	"Experience."	No.
54. Hiram Woods, Jr.	Occasionally to make H. or H. as. manifest.	...	Former mainly.	Both.	Caused, no. Aggravated, one case certainly, possibly two others.

Thirty-two use cycloplegics *rarely* in refraction work after the age of 45.

	First Question.	Second and Third Questions.	Fourth Question.	Fifth Question.
55. A. R. Baker.	Cautiously. More frequently than formerly.	2. Of great value in refraction. 3. Fear of bad effects.	Largely theoretical.	No cases of my own; several others.
56. J. P. Davidson.	Frequently.	2. Advantages, proper correction of refractive error. Disadvantages, none.	Experience.	Several cases, not in marked degree.
57. Edw'd J. Bernstein.	Frequently to uncover ametropia.	2. Advantages same as in young. 3. No fear of bad effects.	Experience.	No.
58. Randolph Brunson.	One or other in about 75 per cent. cases.	2. Uncovers masked H. and H. As. 3. Experience taught me production of glaucoma purely a myth.	...	No.
59. J. Edgar Dean.	About 30 per cent. after 45, instead of 70 per cent. as before.	2. Advantage, greater accuracy. 3. Not so frequently necessary as age advances.	Experience.	No. Perhaps 8 or 10 cases in others.
60. H. Bert Ellis.	If lens tests show discrepancies.	2. Probably cycloplegic in 50 per cent. of cases with no bad results.	Experience.	No. Have not used in glaucoma.
61. C. R. Elwood.	If objective and subjective tests disagree.	2. No disadvantage. Better results in H. and H. As.	Both.	One case.
62. Harold Gifford.	Answer indefinite.	2. Advantages. It gives a fixed point to start from.	...	One case.
63. George M. Gould.	Just as necessary as earlier.	2. No danger in healthy people and healthy eyes. Advantages same as in the young.	Experience.	No.
64. H. F. Hansell.	When there appears to be latent H. or H. As.	2. No danger. 3. Necessity seldom.	Experience.	No.
65. Clark W. Hawley.	Whenever thought necessary.	2. Have uncovered errors that were uncertain before.	Experience.	No. Have seen one case.
66. J. F. Herbert.	No age limit.	...	Experience.	Aggravated in a single case.
67. Alvin A. Hubbell.	Many cases up to 50 years old.	2. No danger except in incipient glaucoma. Advantages same as in the young.	Experience.	No.
68. Edward Jackson.	Cycloplegic in a minority of cases.	2. Same as in younger patients. No danger if glaucoma excluded.	Experience.	But one case.
69. George F. Keiper.	"Always use homatropin (1 per cent. sol.)."	2. Advantage a widely dilated pupil, no danger if followed by eserin.	Experience.	No.
70. H. C. May.	Homatropin and cocain in about 10 per cent. of cases.	2. More accurate correction of As. and H. especially in the nervous.	Experience.	No.
71. Ellis Phillips.	In nearly all cases under 50 years.	2. Can do much more reliable work. Almost no disadvantages.	Experience.	One case.
72. Wm. C. Posey.	Invariably use homatropin when As. suspected.	2. More accurate correction. 3. No bad effect.	Experience.	No.
73. Walter L. Pyle.	In all new patients with active accommodation.	2. Advantages suspension of accommodation; no danger from age.	Experience.	No.
74. R. L. Randolph.	Generally use cycloplegics beyond 45; not influenced by age.	2. Have found no dangers. Omitted when two consecutive examinations agree.	Experience.	No.
75. Wendell Reber.	Used as readily between 45 and 50 as before.	2. Advantage both total amount and axis of As. are more certain.	Experience.	Personal knowledge of but one case.
76. H. O. Reik.	Homatropin used with majority.	2. Great service in securing accurate results; no bad effects.	Experience.	No.
77. Dudley S. Reynolds.	Homatropin used when V. is below 6/VI and in astigmatism.	2. Have seen no bad effects from homatropin.	Experience.	Homatropin, no. Atropin, yes.
78. G. Oram Ring.	Very frequently.	2. Necessary in certain cases.	Experience.	One case (accidental).
79. S. D. Risley.	Frequently.	2. Necessary for accurate work.	Extended experience.	No; many cases in others' practice.
80. S. O. Richey.	Frequently.	2. Necessary for accurate work.	Experience.	No.
81. G. C. Savage.	Frequently.	2. No danger in proper cases.	Experience.	No.
82. Wm. M. Sweet.	All cases where spasm of acc. suspected.	3. No fear in proper cases.	Experience.	No.
83. J. L. Thompson.	Always at first examination.	2. Necessary.	Careful observation in at least 20,000 cases.	One case.
84. C. A. Vesey.	Always in As. and H.	2. Necessary for accurate correction.	Experience.	No.
85. J. E. Weeks.	Used in first examinations.	2. Required for careful examination.	Experience.	Cocain seemed to excite attack in one case.
86. Cassius D. Westcott.	Cycloplegia at all ages.	2. More accurate refraction. 3. Exclude glaucoma.	Experience.	No.
87. W. H. Wilder.	No hesitation in asthenopia and astigmatism.	2. In ophthalmoscopic examination and relief of spasm.	Both.	One case, quickly relieved by eserin.
88. H. B. Young.	May be 5 per cent. of cases. Either homatropin or scopolamin.	2. Same advantages as in younger people.	Both. I use caution.	Not in refraction work. One case after extraction. Relieved in 12 hours by eserin.
89. C. F. Clark.	Acc. often active and cycloplegic used without hesitation.	2. Same advantages as in younger patients. No disadvantages if glaucoma excluded.	Experience.	Glaucoma excited in a few not refractive cases.
90. W. T. Southard.	Homatropin frequently; atropin never.	2. Necessary to correct examination. No disadvantages if used carefully.	Experience.	No. I carefully exclude glaucoma.

Thirty-six use cycloplegics frequently in refraction work after the age of 45.

22. **H. V. Würdemann:** Both unnecessary, as the accommodation powers are weak and latent, hyperopia has become manifest and fear of bad effects.

24. **S. C. Ayres:** I occasionally use cycloplegics in persons beyond 45 years of age. I do not hesitate to use them when the asthenopic symptoms are distressing and where former glasses have not been satisfactory.

27. **Swan M. Burnett:** I do not use them at that age, because the accommodation has ceased to be a disturbing factor, and a wide pupil brings disadvantages of its own.

32. **Leartus Connor:** I used mydriatics in my early practice frequently until convinced that no good came from them, as a rule. In some cases in which hardening of the lens had been long delayed mydriatics had the same value as at a much earlier age. However, my practice is based on my experience.

33. **E. C. Ellett:** In cases with asthenopia and small errors, .50D. or less with astigmatism, especially oblique astigmatisms, I find most help from mydriatics in people over 45. I fear a bad result (i. e., glaucoma); hence I make unusual effort, by repeated tests, to avoid using them. Their utility is unquestionable, but still they are rarely absolutely necessary in these cases.

34. **A. B. Hale:** I use euphthalmin very often at all ages. Scopolamin I also use when I can not get good refractive results, atropin only when the iris is suspected of inflammatory involvement.

37. **A. E. Kegley:** I rarely use them, giving the patient the full manifest correction, and at this age with their assistance, the latent trouble with accommodation soon shows, and then I continue to change lenses until the patient is comfortable.

41. **Jno. McReynolds:** If a diseased condition indicates a cycloplegic I use it at any age, and after the extraction of glaucomatous cataracts I have used atropia very frequently with the result of good reading vision, and the same is true in some cases of iridectomy for glaucoma in which an iritis called for rest of the iris and ciliary body.

44. **C. A. Oliver:** Advantages very rare. In a few cases of pathologic spastic condition of the ciliary muscle, which later have given way to paresis, either normal from senile changes or abnormal from degenerative processes. No disadvantages, as I make it an unalterable rule to thoroughly study every case of ophthalmic disease presented to me.

54. **Hiram Woods:** Occasionally I find it necessary to make H. or H. A.'s (diagnosed objectively) "manifest." Such cases usually have P. over-corrected by examining optician and static error unnoticed. I do not hesitate to use a cycloplegic if indications are present which would make me use it on a young person.

57. **Edward J. Bernstein:** I frequently find uncorrected ametropia or badly corrected ametropia, just as one finds them in younger persons. Often with this added, that they are borne with resignation as a part of the inevitable while younger persons would complain. Then, of course, with a dilated pupil more peripherally placed lesions are often brought out.

59. **Edgar Dean:** I certainly do not draw the line at 45 years at all, nor even make an inflexible line at 60 years, for my records show their use at 62, 63, and in one case at 70 years.

66. **J. F. Herbert:** Personally, I think the age limit for the use of mydriatics and cycloplegics is a "bug-a-boo," a "myth." I never hestitate after I have made an ophthalmoscopic examination and find no contraindication, to use either up to any period of life. When I find a patient at 50 years or over with active accommodation I always use a cycloplegic.

67. **A. A. Hubbell:** I have used cycloplegics (mostly) homatropin) for 22 years in a large practice, and I have never induced or aggravated a case of glaucoma by them. I have even used homatropin in known incipient glaucoma without aggravating it. In these cases I usually supplement with a myotic.

70. **C. H. May:** I am careful to test the tension and to examine the fundus before using the cycloplegic (hom. and co. combined). I have never seen a case of glaucoma result from such instillations, either in my own practice or in that of others.

72. **Wm. C. Posey:** I have used homatropin in this way in thousands of cases and have never had a bad effect following the use of the drug. I have never seen glaucomatous symptoms provoked by it. Of course, I always take the precaution of making careful ophthalmoscopic examination of cases prior to the instillation of any drug and where there is glaucomatous excavation or the suspicion of one, a mydriatic is never used.

75. **Wendell Reber:** If there is any low-grade cylindric error the ciliary muscle is making the fight of its life between 45 and 50, especially in sound, healthy subjects, and non-mydriatic prescriptions must be based on frequently repeated examinations or the surgeon will be often led into error. Even with repeated measurements it is often impossible to assure one's self exactly what the refractive status is. If there is high-grade astigmatism the patient will in all probability have been carefully refracted under cycloplegia before presbyopia sets in and the ciliary muscles have been taught correct habits. It is in the presence of astigmatism of 0.75D. or less that the ciliary muscle can lead the most painstaking examiner astray when measuring incipient presbyopes, and particularly is this the case in moderate exophoria. Therefore, unless the previous ophthalmoscopic study contrainterdicts cycloplegia, I never hesitate to use homatropin with cocain any time between 45 and 50, or scopolamin with cocain in the proportion of 1/5 of a grain of the former to the ounce of water. Any latent glaucomic tendency that may be lit up by these weak solutions is easily controlled; and what is of more consequence, it will bring to early notice and treatment occasional cases of glaucoma that would otherwise progress to a much more dangerous degree before being recognized, as pointed out by Jackson three or four years ago.

77. **Dudley S. Reynolds:** Cycloplegics are frequently necessary in persons above 50 years of age. Considerable accommodation exists in the eyes of robust astigmatics of 60.

79. **S. D. Risley:** I have never seen a case of glaucoma in my own hands caused by mydriatics. I have seen cases of glaucoma following a mydriatic, but a careful study has in every case justified the belief that the eye was on the verge of an attack before its use, and that the mydriatic should not have been used primarily. I believe that the mydriatics should not be used in suspicious eyes at any age.

80. **S. O. Richey:** The practice is to wholly correct the static refraction in those above as well as those below 45 years of age.

83. **J. L. Thompson:** Many persons over 45 years of age have considerable power of accommodation, I therefore always use cycloplegics in my first examinations. Indeed, this is my practice until after their 50th year: scopolamin, when under 46; homatropin, if over that age.

84. **C. A. Vesey:** The advantages are that a latent astigmatism may thus be worked out so that a proper correction of the refractive error may be given, thus making the patient far more comfortable than if no correction of the astigmatism was made. In cases of high hypermetropia in which the amount of hypermetropia does not manifest itself by the ordinary use of the test lenses, the degree of hypermetropia may be ascertained, the difference in amount between the two eyes noted, so that we have a much better knowledge of the optical conditions of the eye to form a basis for the more intelligent prescription of glasses. Thus Mrs. L., aged 48, had been using +S.2.50 D. in each eye for several years, giving a vision of 6/6—. No other glasses were employed. Additional spherical or cylindrical lenses blurred the vision. Refraction under homatropin gave the following result: O. D.+S.5.00 D.⌣1.00 D.C.ax.95 deg.V.=6/5; O.S.+S.5.50 D.⌣+1.00 D.C.ax.85 deg.V.=6/5. A reduction of +S.50 D was made in each eye, and the patient has been wearing the glasses with perfect comfort. In this case a large amount of latent hypermetropia, as well as the astigmatic error, did not become manifest until after the use of homatropin.

87. **W. H. Wilder:** There is the great advantage that the refractive media and the fundus can be carefully examined.

Retinoscopy can be practiced more satisfactorily. I have found some patients over 45 years of age who could partially conceal astigmatism, because of spasm, who were relieved by the correction of the defect. This is particularly noticeable in nervous individuals.

QUOTATIONS CONCERNING GLAUCOMA.

3. C. H. Beard: A case of hemorrhagic glaucoma once occurred in my practice which I greatly fear was due to the use of atropin. I consider the indiscriminate employment of mydriatics in elderly persons, especially with those of degenerate vascular systems, as most pernicious. In the fitting of glasses, I rarely prescribe a cycloplegic for an individual past 35.

19. K. K. Wheelock: Have known glaucoma to be precipitated in two cases by the mydriatic effect of cocain. Have had two cases and in others such diminution of vision, temporarily, as led me to think disturbances in intraocular circulation must be the cause.

21. Casey Wood: I have seen two or three cases in which glaucoma followed the use of both cycloplegics and mydriatics, but as the ordinary forms of this disease show themselves in attacks I see no reason why these remedies should be blamed for a disease that would appear in any event. What proof have I, in the cases referred to, that the glaucomatous attacks would not have appeared in any event? Mydriatics and cycloplegics, say a million times a year, are employed in the United States; would it not be remarkable if glaucoma—a comparatively common affection—did not occasionally arise after their employment? If one were to accept this *post hoc propter hoc* reasoning, one could equally show that glaucoma is brought on by taking Epsom salts or riding on the elevated trains. That both classes of drugs raise the tension perceptibly in about 10 per cent. of all cases of eye diseases where there is congestion of the uveal tract (and in some normal eyes), and that the proportion is greater (to an extent unknown to me) in persons over 45 years of age than in those under 25, is, in my experience, true, and that in persons prone to attacks of glaucoma mydriatics very occasionally precipitate an impending attack, I believe, but this disadvantage can usually be eliminated by noting the history of the case and in making the usual preliminary examination of the eye before using the cycloplegic or mydriatic.

22. H. V. Würdemann: Cases of so-called simple glaucoma where, for diagnostic purposes, I have used atropin to develop further intraocular tension. Marked cases in which atropin has been used by unskilled practitioners where acute inflammatory glaucoma has ensued on use of atropin instillation for purposes of measuring the refraction.

26. A. E. Bulson: I think I was instrumental in producing glaucoma in a previously sound eye and normal tension by the use of atropin. Since then I have used atropin in patients over 40 to 45 with extreme caution.

28. Fleming Carrow: I have the records of one positive and undoubted case of glaucoma, being produced by the continued use (one month) of atropia sulphate for purposes of refraction.

30. Wm. Cheatham: I can not cite a case of a person that age or over. I have seen it in younger patients several times. I saw it in one case in which atropia was given internally in a large dose in a woman 55 years old.

34. Albert B. Hale: One case, a woman of 60, suffering from chronic glaucoma, had the pain temporarily increased by euphthalmin.

35. George N. Harlan: Have seen an attack of violent glaucoma directly induced by instillation of atropia and retinal pulse induced by use of homatropin.

37. A. E. Kegley: I have had four cases where glaucoma followed the use of atropin in patients above 45 years old. Three speedily recovered, and one still has chronic glaucoma in a light form.

38. H. Knapp: Both, in three cases even by euphthalmin; in all cases the attack was, however, promptly cut short by instillation of 1 per cent. solution of eserin.

45. Casper Fischel: I remember distinctly three cases in which simple glaucoma was detected by the use of homatropin and cocain.

46. A. E. Prince: I have had three cases where I recognized a mydriatic as the exciting cause of glaucoma.

48. Geo. E. de Schweinitz: A woman past fifty, with chronic nervous disease, probably some irregular form of ataxia; one drop of a 1 per cent. solution of atropin instilled for ophthalmoscopic purposes by the resident physician; sharp glaucomatous attack followed a few hours later, controlled with eserin. 2. A Jewish woman, aged 36, homatropin instilled for the purpose of determining refractive error by a colleague; typical acute glaucoma a few hours later; treatment eserin, salicylate of sodium and paracentesis cornea, the patient refusing to permit iridectomy. Three weeks later I saw the patient, typical glaucoma resembling the chronic congestive type; patient declined operation. Subsequent history unknown. 3. Acute glaucoma in a woman aged 35, brought on by the instillation of a mydriatic, whether atropin or some other mydriatic unknown, for the relief of an acute inflammation of the eye occurring during grippe; patient seen one week later with typical acute glaucoma, promptly relieved by iridectomy. There is some doubt whether the primary inflammation was an attack of glaucoma aggravated by atropin, or whether it was an ordinary conjunctivitis, and the attack of glaucoma induced by the instillation of atropin. I did not see the patient until a week after the increased intraocular tension began. Both cases evidently were predisposed to glaucoma, and this I believe to be the history of all cases of glaucoma which are produced under the influence of mydriatics. I have a number of times seen what seemed to me to be temporary rise of tension after the instillation of mydriatics in elderly people, but never enough to amount to a glaucomatous attack, and always controlled by eserin.

61. C. R. Elwood: I have had one case in which atropin undoubtedly aggravated if not caused an attack of glaucoma. Mrs. B., aged 23: Ten days previous to my first visit patient complained of severe shooting pains through temples, and had called a general practitioner, who on finding the eyes much inflamed prescribed atropin and hot boric acid compresses. At the time of my visit vision in the right eye was limited to form perception and in the left 20/80 minus, tension increased and the asthenopic symptoms were so pronounced that the field of the left eye was unreliable. A continuance of the hot boric acid compresses and internally the administration of liberal doses of the iodids and salicylates, with instillations of eserin and night pilocarpin sweats relieved the symptoms and restored vision in what was to me a gratifyingly short time of four days. There was no evidence of iritis, and the result of medication led me to make a diagnosis of acute glaucoma.

65. C. W. Hawley: I saw one case in which homatropin and cocain were instilled and within one hour double acute glaucoma was produced in a man of 46 years of age. No relief followed the use of eserin, and on the third day a double iridectomy was performed with complete relief. I hardly would say that homatropin and cocain in this case were the direct cause of the symptoms, simply being an acute attack of a condition already present.

68. Edward Jackson: I have seen but one case in which a glaucomatous exacerbation was produced by a mydriatic This was in a woman aged 25 years. I precede the use of a mydriatic or cycloplegic in all cases by an ophthalmoscopic examination and a consideration of the probability of glaucoma.

70. C. H. May: As a rule I do not use a cycloplegic in patients beyond 45; in nervous individuals, especially women, I employ homatropin 2 per cent. combined with cocain 1 per cent. I do this also if the first glasses prescribed do not give satisfaction. This applies to patients 45 to 50. In such cases I use a cycloplegic, probably in 10 per cent. of cases. After the age of 50 I rarely use it.

In about 10 per cent. of cases between 45 and 50 described above the use of cycloplegics leads to more accurate and better correction both of astigmatism and latent Hy. (for latent Hy. does exist in quite a number of instances, notwithstanding the many views to the contrary.)

71. Ellis Phillips: I had one case, a woman about 45 years of age, whom I asked to put a solution of atropia, gr. ii

to ʒi in her eyes three times a day for two days; she put it in twice and then sent for me to call, complaining of marked pains in the head and eyes and colored light about the lamps I had no ophthalmoscope with me, and was not sure of increased tension. I prescribed eserin solution, and in a few days she was all right. This was the only case that gave me anxiety.

75. Wendell Reber: I have personal knowledge of but one case of true glaucoma induced by the use of homatropin after 45 and in that case (a hospital one), I believe closer ophthalmoscopic study would have prohibited the use of the mydriatic.

83. J. L. Thompson: I can recall but one person in whom the glaucomatous process was temporarily set up after the use of a mydriatic. This occurred in a young married woman aged 42. It subsided in a few days after the application of a weak solution of eserin.

Doubtless the reason why I have not met with more cases is because I take great pains in examining the tension of all persons nearing 42 years of age before using cycloplegics. If there is the least suspicion of tension, or if the patient mentions any idiosyncrasy concerning the former use of any of the mydriatics, I then examine as best I can by other means.

CONCLUSIONS.

No age can be arbitrarily fixed beyond which cycloplegics must not be used, and while they are as necessary in certain cases after 45 as they are before, they are required in fewer and fewer cases as life advances. But since there is more danger of glaucoma in the elderly, and as mydriatics tend to increase intraocular tension, these drugs should be used with caution after the age of 40, and in certain cases should not be used at all.

BIBLIOGRAPHY.

1. Fuchs: Text-Book of Ophthalmology. N. Y., 1899.
2. Clarke, E.: The Use and Abuse of Mydriatics, Clin. Jour., London, 1898-9, xiii, 81-85.
3. Swanzy: Diseases of the Eye. Phila., 1900.
4. May, Chas. H.: Diseases of the Eye. N. Y., 1901.
5. Nettleship: Diseases of the Eye. Revised and Edited by W. H. Spicer, Phila. and N. Y., 1897.
6. Watson, D. C.: Practical Handbook of Diseases of Eye. N. Y. P. 897.
7, 8, 9. Norris and Oliver: System of Diseases of the Eye. Phila., 1897-1900.
10. Jackson, E.: How to Use Mydriatics. Also article in de Schweinitz and Randall's American Text-Book of Diseases of Nose and Throat.
11. Terrier: Quand et comment faut il employes l'atropine en Oculiste? Rev. gen. et Clin. et de Therap. Par., 1897, xi, 611.
12. Peltier, F. L.: Des Accidents atropiniques dans le traitement des maladies des yeux. Rec. d'ophth., Par., 1890, 3 s., xii, 642.
13. Kalb: De l'abus de l'atropine en therapeutique oculaire. Rev. Med. d. soc. savantes. Par., 1894, xii. 228-223.
14. Satterlee: Abuse and Use of Atropine in Eye Treatment. Buffalo Medical Journal, 1896-7, xxv, 149.
15. Grimsdale, H.: Glaucoma Following Atropine, Med. Times and Hosp. Gaz. London, 1900, xxviii, 291.
16. Knapp: A Case of Glaucomatous Attack Following Instillation of Euphthalmin. Arch. f. Ophth., N. Y., 1900, xxix, 313.
17. Hull: A Case of Glaucoma, the Result of Injudicious Use of Atropine. Atlanta M. and S. J., 1885-6, N. S., 11, 34.
18. Brown, E. J.: A Case of Glaucoma Following Use of Atropia. Ophth. Rec., Chicago, 1897, vi, ii.
19. Coggin, D. D.: Glaucoma Produced by Atropia. Am. J. Ophth., St. Louis, 1885, ii, 8.
20. Cant, W. J.: Acute Glaucoma Induced by Atropine After Iridectomy. Ophth. Rev., Lond., 1884, iii, 265.
21. Hinshelwood, J.: Acute Glaucoma After Use of Cocain, with Remarks on Use of Holocaine in Glaucoma. Ophth. Rev., Lond., 1900, xix, 305.
22. Dyer: On the Use of Atropia in Diseases of the Eye. Tr. M. Soc. Penn., Phila., 1882, xiv, 253.
23. Robertson, J. W.: Northwest Lancet. St. Paul, 1893, xiii, 341.

DISCUSSION.

Dr. Herman Knapp, New York—I have used cycloplegics in strong solution after operations for glaucoma, for the reason that in a number of cases you find a day or two after the operation that there are a number of fine, filiform adhesions, which in all probability are the result of blood or some irritating substance. I find that atropin dropped into the eye on the first day after the operation, while the eye is still soft, does not increase the tension. I have never in this practice, which is not new with me, seen any unpleasant result.

As to the production of glaucoma by atropin, homatropin and euphthalmin I have seen it repeatedly, in every one of them, frequently with atropin, less so with homatropin, and rarely with euphthalmin, viz., in three well-developed cases, increased tension, to plus 2, steamy cornea, and dilatation of the pupil, all the symptoms of a glaucomatous attack. Those attacks have not induced me to abandon euphthalmin, for they are easily cured with eserin; not so well with pilocarpin. One case of euphthalmin in which the remedy had been used for 6 months had developed well-marked atropin granulations. This suggested the idea to me that euphthalmin was in all respects a weak atropin, but using it in a patient with marked idiosyncrasy against atropin, it failed to produce erythema or any other irritation.

Dr. John E. Weeks, New York—I think there is a general impression that a mydriatic should not be used in glaucoma, even after the operation of iridectomy. In my association with Dr. Knapp I think it was very seldom that a mydriatic was used after an operation of this kind, but I found that the late Dr. Noyes made it a routine practice to use atropin immediately after iridectomy for glaucoma and continued it for two or three days, or until the wound was well closed. I think many of us have observed the adhesions Dr. Knapp has spoken of in the healing of the eye after iridectomy for glaucoma. I have used atropin in this way and have not regretted it; however, if there is no evidence of any irritation of the iris I would not use it after the first instillation.

In regard to the question of glaucoma being produced by mydriatics, I have observed one case after the use of cocain; at least the attack of glaucoma came on a very short time after its use, a half hour I think. There was a previous glaucomatous tendency. Cocain was employed in order to permit of a better view of the interior of the eye. I do not think the attack would have come on if the cocain had not been used.

Dr. S. D. Risley, Philadelphia—It has not been my habit to use a mydriatic after iridectomy for glaucoma, and it seems to me that it might not always be free from danger. I recall one instance where atropia was instilled by mistake in one of my cases of glaucoma at the Wills Hospital. Relief had followed the iridectomy and all was going smoothly until the third day, when I found a return of pain and increase of tension. The nurse then told me that atropia had been used by mistake. It is true the anterior chamber had been restored. Dr. Knapp, I understand, used it before the healing of the wound.

Regarding the occurrence of the conjunctival trouble alluded to by Dr. Knapp, I have seen the same thing follow the prolonged use of eserin in chronic glaucoma, but it may have been due to micro-organisms in the solution as suggested by Dr. Weeks. There were two instances, however, where the solution of atropia, coming from my own druggist, caused this conjunctival disease, notwithstanding the care habitually used to supply sterile solutions. They are unquestionably, I think, cases of idiosyncrasy to all mydriatic solutions, but I have never seen any evidence of this peculiarity for eserin.

Dr. F. W. Higgins, Cortland, N. Y.—I expect to hear more about the subjective symptoms following the use of mydriatics in old people. Dr. Starkey's paper refers more particularly to the use of atropin in refraction. It is very unfortunate that for months and even years after the use of a mydriatic patients refer every eye symptom to the instillation of the drug. Of course in children the symptoms fade out in a very short time, and you can brush away their complaints, but in people about middle life, or beyond, these symptoms are not always altogether imaginary. At a time when accommodation is beginning to fail, completely paralyzing it for several days may certainly be productive of untoward symptoms. For this reason I am sure that where it is possible we should examine these patients several times rather than subject them to the use of atropin to finish our diagnosis in one day.

Dr. John O. Reynolds, Dallas, Texas—Dr. Starkey reported me correctly in saying that I have frequently employed mydriatics in operations for glaucoma and glaucomatous cataract, and I feel that it is a reasonably safe procedure for the first two or three days following the operation, before the wound has closed, but I want to be placed on record as giving a caution as to its use in other kinds of operations that do not involve the opening of the globe. If you have opened the globe there is not so much danger, but I recall several cases presented to me where glaucoma had developed after using even cocain where an operation was performed that did not open the globe. One patient was brought to me completely blind following an operation under cocain for the removal of a pterygium. So when doing any operation that does not open the eyeball, and after presbyopia has developed, and with use of mydriatics, you should keep the patient under close observation and use a myotic afterward if pupil does not promptly return to normal size.

In the matter of refraction in presbyopes I use mydriatics, not cycloplegics, and keep the patient in my office until I see the pupil go down. I do not want a presbyopic patient who comes from a distance and uses a mydriatic to go away until I feel satisfied that everything is all right.

Dr. H. B. Young, Burlington, Iowa—I want to say, in connection with the use of cycloplegics in refraction, in people over 45, that I use them, not very often, perhaps, but occasionally in strong, robust persons, who seem to have an excessive amount of accommodation. I believe these people are not liable to glaucoma, because I understand that failure of accommodative power is one of the prodromals of glaucoma. I have had glaucoma follow two cataract extractions that I believe was due to atropin, in a patient 79, and in another 42 years of age. In the first case I used it because a colleague had operated on the other eye and had failure because of iridocyclitis. Twelve hours later I was called to find the patient with acute glaucoma. Eserin controlled the attack and result was satisfactory. In the second case, a teacher, I operated on the left eye at one vacation time and was unable to remove all the soft cortical matter. A rather mild iritis followed for about two weeks, with final absorption of the cortical matter and a good result. She subsequently came for operation on the other eye, and suspecting from the appearance that I would again meet with some difficulty in dealing with the cortex, I used atropin, which I had not used in the other eye. In five days there was increase of tension and I had to resort to eserin. I was pleased to hear Dr. Knapp make the statement he did as to the use of atropin after iridectomy for glaucoma. If I had had the courage to use it in a recent case some filamentous adhesions to the capsule might have been avoided.

Dr. J. A. Lippincott, Pittsburg, Pa.—I may say, however, that in my early practice I was in the habit of using a cycloplegic, atropin, much more frequently in elderly people than I do now. A good many years ago I produced glaucomatous phenomena in two cases both about 50 years of age by the instillation of this drug. Both cases responded promptly to a myotic, and no harm was done; but since that time I am rather cautious about mydriatics for refraction purposes beyond middle life. Still, we occasionally meet with cases even above 50 years of age in which the accommodation must be paralyzed to secure satisfactory results. In such cases, after a careful inspection and palpation of the eyes, I usually begin with a weak solution of homatropin, and watch the effect closely. If no unpleasant phenomena appear I proceed as in a young person.

Dr. Edward Jackson, Denver—In reference to Dr. Starkey's conclusion that cycloplegics should be used with caution after 40, I would amend that by striking out "after 40." They should be used with caution always. The only case in which I have seen glaucoma produced by a cycloplegic was in a young woman of 25; and in that case I think there is no doubt that if a more thorough investigation of the history had been made before using the drug a positive diagnosis of glaucoma would have been made.

It is true that patients often have a tendency to ascribe everything that happens in the way of eye symptoms for some time afterward, to the drug that has been used. If a patient has used atropin and then spends ten days or two weeks with nothing to do but think about his symptoms, it is likely that he will refer some of them to the use of the drug. The risk of that, of course, is very much lessened by the use of the brief mydriatics. That is, perhaps, the chief reason why they should be used after 45. But this risk can also be diminished by carefully warning the patient that the symptoms will not pass away after the use of atropin for at least two weeks. They are anxious about the effect until recovery is absolute. Apart from that danger I think there is the same need to use strong cycloplegics in some cases after 45, and even after 50, as in younger patients. In my experience where there is spasm of accommodation it yields more slowly as the patient gets older. There are a number of cases where it is just as necessary to use a cycloplegic after the age of 50 as before.

Dr. W. H. Bates, New York—I would like to record the history of a patient in whom atropin produced a very unusual effect. The patient was not 45, but a young girl of 18 Atropin had been used once with no bad effect. Later she was placed a second time under atropin, 2 gr. to the ounce, three times a day for two days and it was then discontinued. The pupil did not contract, but remained dilated six months, when it began to contract. The paralysis of accommodation continued. I saw the patient ten years later and there was still paralysis of accommodation.

Dr. Starkey—With regard to glaucomatous exacerbation being relieved by pilocarpin and eserin, I would say that in the one case I mentioned there was considerable difficulty, though both were used, and for a number of days I could not get the tension down and then it seemed prone to rise again.

In regard to the accommodation being so much weaker after 45, there is a difference of opinion expressed about that in the replies sent in. While some say that after 45 they use weaker or less amounts of cycloplegics and others that they use only homatropin and cocain, two or three say that they have to use stronger cycloplegics and for a longer time in order to get complete relaxation than they do in younger people.

CARCINOMA EPIBULBARE PLANUM.

B. MATYS, M.D.
ASSISTANT TO PROFESSOR DEYL, AT THE BOHEMIAN EYE CLINIC.
PRAGUE, AUSTRIA.

Epibulbar tumors are those which are localized on the margin of the cornea, where it joins the sclera (limbus corneæ), from which they spread over the cornea and conjunctiva, sometimes also in the sclera. They do not include secondary tumors occurring in the ciliary body, choroid or lids. Among the more frequent benign tumors occurring here are dermoid, fibroma and lipoma; the malignant forms being mainly sarcoma and carcinoma. The early diagnosis of these, especially the latter, is of the greatest importance, since by its timely removal the eye may be saved and, according to the testimony of medical literature, without any recurrences. The epibulbar tumor in our case was flat, peculiar in appearance and color, unusual in this respect among the malignant forms, but certainly belonging to the epibulbar tumors. Noyes had met with only three cases in seventy thousand patients. In the out-department of the Bohemian Eye Clinic, Prague, thirteen cases have occurred out of a total of eighty thousand patients during the last ten years, and Professor Deyl, now at the head of the ophthalmological clinic, affirms that he saw no such conjunctival tumor during his experience as assistant and in his polyclinic practice of fifteen years nor in his private practice, during which time he has observed or treated more than one hundred thousand cases.

NARRATION OF CASE.

Our case was V. J., 78 years old, miller by occupation, resident of Borosin, Bohemia, who was received into the Bohemian division in May, 1902.

Previous History.—He states that he had not been ill during the past fifty years, but before that time he had had gonitis rheumatica, but never any eye illness. His vision had always been better for near than for distant work. One and one-half years ago the left eye became inflamed and some lachrymation was noticed, and he had such pains from 11 to 3 o'clock at night that it was impossible for him to sleep during these hours. Six weeks after the first appearance of these pains he noticed that his eyesight was failing, and two months later (just at Christmas) his daughter told him that he had a white spot on his eye. From this time on he had no rest. The eye became more reddened, his vision continued to fail and the white spot increased in size. The patient was unable to say where the white spot first appeared. During the day he had no pain, but at night regularly from 11 o'clock to 3 the pains were so severe that he could not sleep. Besides this he was troubled more with lachrymation. He consulted no physician, but was satisfied with remedies his neighbors suggested.

Condition on Entrance.—Patient in good health aside from hypertrophic prostatitis and his eye disorder. The right eye, aside from chronic catarrhal conjunctivitis and myopia modica, is normal. In the left eye the lids were normal, the conjunctiva of the lids a little inflamed and edematous, the fornix slightly edematous and injected. The tumor is located in the lower half of the bulbar conjunctiva. It takes in the conjunctiva from the limbus cornea to the fornix irregularly, so that in the lower external quarter where it is broadest it measures 1.5 cm. There is a small extension into the superior external quarter, here touching the limbus, and it also extends downward so that a little of the tumor is seen occupying the inferior nasal quadrant. The tumor encroaching on the cornea a distance of two millimeters is irregularly margined and very well defined, so that at no place does it enter into the cornea. From the healthy conjunctiva, where the arteries are larger, the tumor is well limited with irregular margin and is raised 1.5 millimeters above the normal surface. The highest point of the tumor is in the inferior external quadrant, measuring 3 millimeters in thickness and 3 in diameter. The tumor is movable with the conjunctiva, the general tint is white. At the limbus it is a chalky white, while 3 millimeters from this point, that is, toward the lower border, it is dirty white and somewhat reddish. The surface of the tumor is slightly roughened, squamous and nowhere ulcerated. No arteries can be distinguished in the tumor, its consistency is hard. Cut No. 1 shows the exact localization of the tumor and its irregular outline. The surrounding conjunctiva is slightly injected.

Fig. 1.—Photograph of the eye. Location of the tumor

In the examination of the remaining portion of the bulbus we find an incipient senile cataract and opacity of the corpus vitreum, together with a small degree of myopia. His vision is 5/30 (Snellen), with minus 2 D. equals 5/15.

The tumor was removed by one cut with Graefe's knife after the conjunctiva had been severed with the scissors around its entire margin. This enabled us to see that the tumor had been connected at its base with the limbus; in the inferior external quadrant it had been connected with the sclera only by a pedicle corresponding in place and size to the thickest portion of the tumor. These points or places of attachment were scraped with a sharp spoon, followed by cauterization. The entire wound was covered with the adjoining conjunctiva, held in place by two stitches. The wound healed in a week's time. After the operation the growth was put into 5 per cent. formalin alcohol. It was next put into celloidin, then the entire tumor was cut in the usual way with the microtome and stained with hematoxylin and paracarmin.

Macroscopic examination of the tumor while cutting it revealed its varying thickness, ranging from 3 millimeters, located as stated in the external inferior quarter, to the thinnest portion extending over the sclera and along the limbus, measuring ½ millimeter, or even less. The greatest diameter of the tumor was 2.5 cm.

THE MINUTE STRUCTURE OF THE TUMOR.

The microscopic examination will be reported, taking the cut sections from the lower border of the tumor upward to the cornea, where it ended. With low-power magnification we see in the first section the normal epithelium of the conjunctiva, and beneath it a little connective tissue. The conjunctival epithelium is stratified pavement cells with well stained nuclei. The cells at the base are cylindrical and becoming flatter from below upward. In this it is like the normal conjunctiva except that there is a round cell infiltration. Viewing the conjunctiva from below upward we find the epithelial cells gradually increase in size, and at the point where the tumor begins we find bands of epithelial tissue passing into the tissues below. In these bands we see epithelial cells concentrically arranged, with colloid areas here and there, producing the nest cells so characteristic of carcinoma, which are divided in the section in all directions; we also see round cell infiltration and dilated blood vessels. The surface epithelial cells are not very different from the normal; those, however, in the bands passing downward are increased in size, with mainly round nuclei; the nucleoli are readily seen with a low-power lens. Epithelial cells in the nest cells reveal bodies of keratohyalin (Fig. 2).

Examining a higher section, we see the epithelial cells of the surface changing in character. A layer of epithelial cells is to be seen here, as is seen in cells of the epidermis in the stratum granulosum. The cells here are flatter and contain much keratohyalin, which again is covered by typical cornea epithelium, as in keratosis cutis, which ends in the margin of the cornea and also corresponds to the place in the macroscopic examination where the tumor was chalky white and squamous (as seen in Fig. 3). The bands passing downward are broader, not so much divided as the bands in the previous section of the conjunctiva (see Fig. 4), and the cell nests are not so frequent.

When we examine the part of the tumor which is over the cornea we see that the fibrous papillæ are lower and the entire tumor decreases gradually, changing into the normal corneal epithelium. In those places where we see stratified epithelium the margin of tumor and normal cornea can be very well made out. Where the horny cells terminate the basal cells of the tumor gradually change to the normal basal cells of the cornea. The cell protoplasm is deeper stained (as shown in Fig. 5) and the preparations show that the elastic membrane (Bowman's) sharply divides the proper substance of the cornea, which is unchanged from the tumor. The bands (papillæ) are also here lacking. The entire tumor is well infiltrated with round cells. With low-power magnification we see that the entire tumor is in the epithelial conjunctiva. With higher magnification we perceive that the epithelial cells of the surface located at the limbus are horny epithelial cells, under which we find cells containing keratohyalin which cause the chalky white color seen without the microscope. Below the limbus the tumor is of a pale milky color, which is explained by the presence of bands and cell nests containing colloid material, which are more numerous here than they are above, and which also make it impossible to see the blood vessels on macroscopic examination, though these latter are revealed by the microscope.

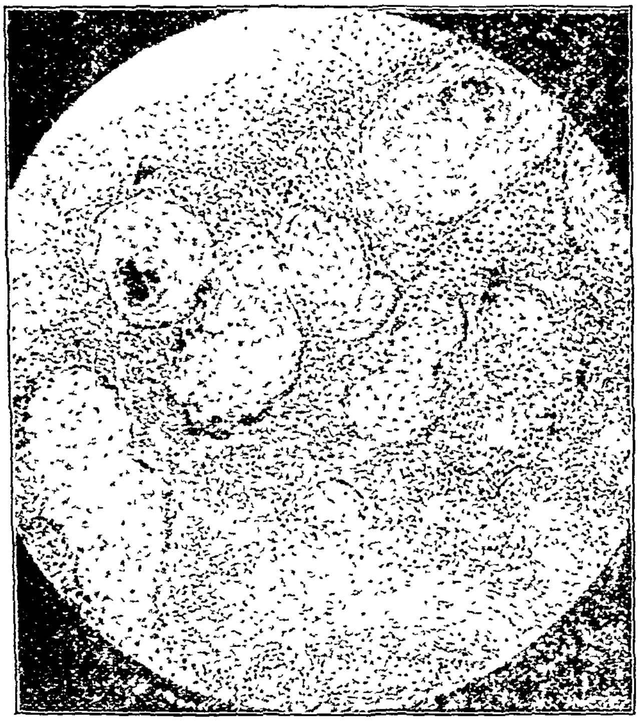

Fig. 2.—Microphotograph of the tumor in the conjunctiva showing cancroid epithelial bands and nest cells.

The microscopic examination shows us that the tumor is a carcinoma, as it contains cell nests containing the colloid material in the epithelial bands and its extension in all directions is also characteristic of cancroid tumors. But ulceration, which is so common in carcinoma, does not appear to have occurred.

In our case, as is usually the rule in epibulbar tumors operated on late, there was a recurrence on the sixteenth day after the operation. In the inferior external quadrant of the cornea a small point or macula about 1 millimeter in diameter made its appearance and was again removed and the spot cauterized. The microscopic examination of this recurring growth showed the same structure as the original tumor. Six weeks later three points of recurrence were again removed from the limbus in the inferior half of the cornea. At the beginning of August, two months after the operation, the condition was as follows: The eye was quiescent. The conjunctiva had healed very favorably, but in the two lower quadrants it was drawn tense toward the side of the original localization of the tumor, where it was firmly adherent. In the external inferior quadrant, 1 cm. from the limbus, the conjunctiva was somewhat edematous, and beneath it could be detected on palpation a swelling of cicatricial tissue 9 millimeters in circumference. In the limbus no recurrences appeared. Instructing the patient to come back instantly as soon as he noticed any white point or change in the appearance of the eye, he was discharged. He returned again for treatment at the beginning of November with two recurrences located in the inferior external quadrant, one at the limbus about 5 millimeters in circumference, the other in the conjunctiva at the point of the existing edematous cicatrix measuring 2 millimeters in circumference. It was not possible to remove these recurrences at this time, as he had an attack [illegible]hiolit[illegible] and bronchitis. The recurrences did [illegible]

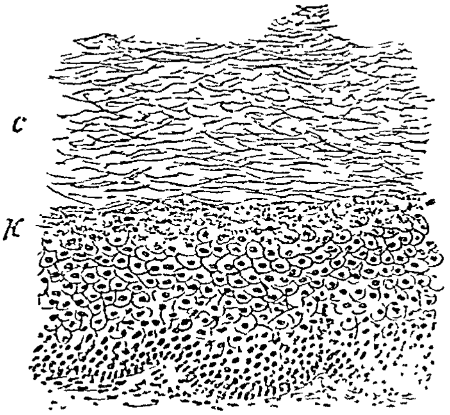

Fig. 3.—Section of tumor in limbus of cornea. C. Horny stratum. K. Stratum of cells containing keratohyalin.

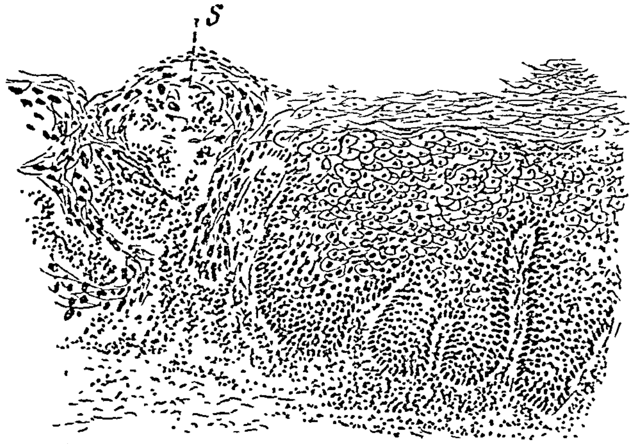

Fig. 4.—Section of the tumor taken previous to that in Fig. 3.

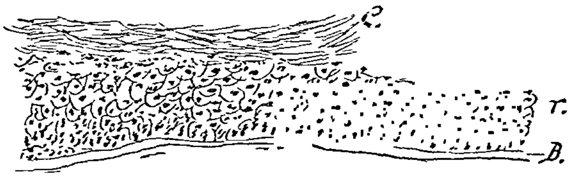

Fig. 5.—Transition of the growth into normal corneal tissue. B. Bowman's elastic membrane. r. Normal epithelium. C. Horny stratum of tumor.

as we looked for them on account of the large size of the tumor. Therefore, only a conservative plan of treatment was possible at this time, as we did not look for immediate trouble in spite of the presence of the new growths, and as the eye had fair visual power enucleation was not seriously thought of.

In our patient there appeared to be a direct relation between the carcinomatous tumor and angioma contrary to the recently expressed opinions in the literature on the subject of angioma and telangioma. It was noticed that our patient had some small pin-head angiomas in the skin of the breast and also very numerous small lentigines. As regards the statistics of carcinoma it may be remarked that in this region such epibulbar tumors are very infrequent. This rare case is published mainly on account of the practical points involved. As regards its etiology, it may be said that we found nothing giving evidence either in the clinical or microscopic examinations of any parasitic origin.

The special practical point of the case to which we will call attention is the common error, so liable to be made, of neglecting an incipient tumor occurring at the limbus or its vicinity. The chief condition with which it is likely to be confounded is phlyctenular ulcer. The celebrated von Graefe made an error of diagnosis in a disease occurring at the limbus. He said that at the first examination he did not make a very careful study of it and so diagnosed a case of carcinoma as a phlyctenular ulcer, and our case had also been previously treated as such by a general practitioner. It appeared, however, in a man of 78, and in our experience phlyctenular ulcer is especially a disorder of children, but we must not overlook the fact that it also occurs in the adult, and even in old age, hence the importance of the differentiation.

Phlyctenular ulcer in the limbus or near the limbus appears as a white spot in the conjunctiva surrounded by inflamed conjunctiva and no arteries are to be seen in the phlyctenule itself while numerous vessels run to the border of the cyst, but none can be traced running over it. Unpigmented sarcoma and carcinoma also start as a grayish white cyst with highly hyperemic surrounding conjunctiva, the remaining portion of the conjunctiva being unchanged. The phlyctenular cyst usually ruptures on the first or second day, leaving an irregularly margined ulceration. This does not occur in tumors except in cancroids or carcinoma planum where the ulceration appears late, occurs in the center of the growth and leaves a lesion surrounded by a hard or indurated wall. In our case no ulceration took place, the superficial layers of the tumor being as hard as callus. Phlyctenular ulcers usually occur in both eyes, and patients have suffered repeated attacks of inflammation during childhood, usually leaving some maculæ of the cornea, blepharitis eczematosa and rhagades of the nostrils. They are improved or cured in a few days with the use of calomel or Pagenstecker's ointment. The contrary to this is the case with tumors. They usually occur in one eye and in old age, and not in young adult life.

Finally, the following difference between phlycentula and tumor in the cornea is to be noticed: In phlyctenules a thick infiltration occurs in the cornea and conjunctiva with later ulceration, leaving an ulcer with irregular wall and infiltrated surrounding tissue. In carcinoma or sarcoma we find a small tumor with smooth walls irregularly protruding over the surrounding surface. In the second place we must differentiate it from inflammation of the sclera (episcleritis). In this disorder we have a small swelling close to the limbus, purplish in color. The conjunctiva over the swelling is injected, otherwise unchanged. Such a swelling may lead to error, which may be mistaken for tumor of phlyctenular ulcer. The conjunctiva will give us the clue in case of doubt, as it is movable over the infiltration in the sclera in episcleritis only, and beneath it we may find on palpation a small swelling of variable size and of hard consistency.

Further, we have the differential diagnosis from vernal catarrh, which is characterized by the hypertrophy of the conjunctival epithelium, corresponding to the palpebral fissure, in location reaching the limbus and rarely ever surrounding the entire cornea, seldom extending over it, and furthermore, of hard consistency, and it is irregularly prominent with grayish white borders. Microscopic examination reveals hypertrophy of the epithelium, as also in tumor, but in spite of this it is a non-malignant disorder. Vernal catarrh usually appears in young children and involves both eyes. Its duration is for years. Its exacerbation during the summer and remissions during the winter months will always enable the practitioner to make a correct diagnosis. Vernal catarrh is usually accompanied by hypertrophy of the palpebral conjunctiva, which is rough in appearance and milky white in color. Lastly, the rate of growth is different from that of sarcoma and carcinoma, being more rapid in the latter. In the differential diagnosis between sarcoma and carcinoma we especially here consider only the more prominent carcinomatous tumors (carcinoma luxurians) and the flattened variety, as in our own case (carcinoma planum). Sarcoma is hard, has vertical margins; carcinoma is usually soft and can be easily lacerated. It is not abruptly margined as in sarcoma, but graduates more into the tissues. In spite of these differences the differential diagnosis is sometimes impossible without the microscopic examination. One-third of these tumors, carcinoma and sarcoma, are melanotic and graver in their prognosis than carcinoma planus (cancroid).

In conclusion, I must acknowledge my indebtedness to Professor Deyl for material help given me in preparing this paper, for which he has my thanks.

LABORATORY INSPECTION OF VACCINE.

ADOLPH GEHRMANN, M.D.
CHICAGO.

In this paper the term vaccine is used in the restricted sense, meaning smallpox vaccine. The purchases of vaccine by the Chicago Department of Health have been subject to inspection and test of each lot received since 1894. During July, 1894, an extended investigation of vaccine was made and showed that glycerinated lymph contained fewer bacteria and had a longer period of efficiency than the dry vaccine points. Glycerinated vaccine was therefore introduced and has been used exclusively ever since. The exact date of the first distributions was Aug. 1, 1894. The points herein brought out are consequently based on the inspection of this supply of the glycerinated product. There have been distributed to the vaccinators approximately one million individual vaccinations from that date to this. Some 20,000 tubes have been used for the purpose of testing; 10,000 for the bacteriologic and animal experiments and 10,000 for the clinical tests.

Every lot received is sent subject to approval and is accepted only after full completion of the observations.

It has been further understood that the department reserved the right to destroy any lot that did not meet its approval. Vaccine has been destroyed on several occasions when found inert, but when rejected because of bacteria it is usually returned to the producers with instructions to allow it to mature before being distributed.

STANDARD REQUIRED.

Deliveries are made in lots of 5,000 to 10,000 vaccinations. Only individual tubes are used. For each lot the following conditions must be fulfilled:

The lot must be from one operation; that is, it must bear the same laboratory number throughout.

The dates on the packages must not precede or exceed the time limit of efficiency. Sixty-day emulsion with 40 to 50 days for the period of use.

The physical conditions must show a uniform emulsion.

Cultures made must show an absence of pus bacteria.

Cultures made must show at least a relatively small number of saprophytic bacteria.

The injection of the mixed contents of 10 or 12 tubes into a guinea-pig must be negative.

The clinical test must give not less than 90 per cent. in typical results in primary vaccinations.

SELECTION OF SAMPLES.

From all parts of the lot 100 tubes are selected; these are marked and reserved for the test. We have found this number ample to insure accuracy. As a general precaution advance sample lots are obtained from producers and tested in the same way as the actual supply. By this means a double check is maintained. This testing, together with the producers' private control, should prevent any failure to detect possible defects.

SPECIAL CONSIDERATIONS.

Soon after the introduction of vaccine in sealed tubes it was noticed that a separation of the more solid particles, epithelium, leucocytes and detrites, took place from the glycerin if the tubes remained quiet for three or four months.

The vaccine as now prepared consists essentially of ground-up epithelium in a variable percentage of glycerin and water. If this mixture is not accurately adjusted, a matter dependent on the experience of the producer, it may be too thin and a separation takes place after a time. We have been able to show that tubes in which such separation is apparent will give a larger percentage of failures in the clinical test than if it had been recently tubed and still in proper emulsion. The reason for this is evidently that the thin glycerin is blown out and does not carry with it a sufficient amount of the virus.

For the culture test it would seem that the use of inclined agar answers all requirements. Each single tube is blown out on the agar surface and spread with the aid of the condensed water in the bottom of the tube. This water also dilutes the vaccine and prevents the further restraining action of the glycerin. The inoculated tubes remain in the incubator for 48 hours and then at room temperature for a further period of three to four days. Petri plates of agar and gelatin have been used from time to time, especially when an actual count of bacteria present was desired. As the qualitative determination is the principal point sought, the agar tube culture is sufficient for this purpose. During the spring of 1896 experiments were made to determine the value of strong antiseptic treatment of the vaccinated area on the calf before scraping off the vaccine, as a means of reducing the numbers of bacteria usually found. It was shown that material with few bacteria could be obtained, and in several instances entirely sterile fresh vaccine was made. Clinical tests of this, however, gave poor results and total failure for that which was sterile. There is a mean that must be followed in producing the virus. It must be as clean as possible, but can not be made initially sterile by using antiseptics. The identification of the bacteria is made by the usual methods.

Saprophytic bacteria are not to be overlooked. They do not develop as rapidly as the pus cocci, and on this account the culture must be kept under observation for several days. The absence of these species indicates clean production. On numerous occasions *Bacillus subtilis, Cladothrix dichotoma* and varieties of moulds and yeast have been present in such numbers that the vaccine had to be rejected on this account.

Animal experiments are made on guinea-pigs. About 10 to 12 tubes are evacuated and the contents mixed with a small quantity of bouillon and injected subcutaneously. This part of the test is made when the tube cultures show a sufficient reduction in the number of pus bacteria.

From the animal experiment the presence of *B. tetani, B. tuberculosis* or other specific pathogenic bacteria should be determined. After making several hundred inoculations I have not had a single animal die of tetanus or show tuberculosis at the point of injection. These bacteria occur with extreme rarity in vaccine, and probably in the few cases where they have been reported they could have been found in considerable numbers.

The time required for these experiments is 4 or 5 days. Cultures are made first, which in the incubator will indicate as to pus bacteria in 18 to 24 hours. These tubes are now put aside for growth of saprophytes for 3 or 4 days. In the meantime, providing that the culture result was satisfactory (few or no pus cocci), the animal experiment is made. The clinical test is next started, and requires a further 10 days for completion. If this shows 90 per cent. typical the lot is passed for distribution. Fourteen days, therefore, is thus used in establishing the quality of the product, and this should give at least 30 days in which the vaccinators can use their supply with every assurance of a safe and successful result.

Laboratory of the Department of Health.

Professional Unselfishness.—It might almost seem to a philosophical observer as if the leaders in this movement had unselfishly made up their minds to prove to men and women that if they had more common sense they would promptly abolish the medical profession by taking away its *raison d'être.* One seldom hears of a lawyer exhorting his neighbors to avoid litigation so that they may not require his services. Yet every reputable physician is expected not only to cure diseases, but to give his patients such hygienic advice as may prevent them from needing him again. This is a good deal to expect of human nature in individual cases; but the problem which is at the present moment most strenuously attacked by the medical men of Europe and America is how to reduce the number of their patients and the amount of their own income by 10 per cent. at one fell swoop. At least one person out of every ten dies of pulmonary tuberculosis and other forms of tuberculosis, and it is this disease that physicians are now striving with all their might to exterminate utterly, or at least to limit as much as possible. Since tuberculosis is rarely contracted by the medical practitioner, his labors in striving to eliminate it from his practice accordingly stand as a remarkable exemplar of humanitarian altruism.—"N. Y. Evening Post."

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CHEMICAL INDIVIDUALITY.

There are abundant evidences of the chemical differentiation of species, which in some instances is as prominent as the morphologic distinctions. For example, we find specific varieties of hemoglobin, which, although functionating similarly in all animals, and with closely related composition, yet show quite different crystalline forms. Probably the differences in the effects of drugs on different animals depend on different chemical composition of certain parts of the animals. The entire work on immunity testifies to these chemical peculiarities of divisions in the animal kingdom. Even natural selection plays a part in such differentiation, as seen in the protective colorings, the venoms, the defensive odor of the skunk, or the ink discharged by the cuttle-fish. The peculiarity of proteid metabolism by which in reptiles and birds the chief end product is uric acid, while in mammals it is urea, has been the pivotal point for most of the study, theorization and contention that have made "uric acid diathesis" familiar even to the laity. Now, while the morphologic differences in animals are plain, and therefore the chief basis for classification, the chemical differences are for the most part equally obscure, and hence of little use in systematic classification. Still it is altogether possible that as physiologic chemistry becomes more developed, and the methods more refined, the chemical relationships may help out in places where morphology alone is confusing. Probably the best example that can be cited of accomplishment in this direction is furnished by the precipitins of serum, as used in the medicolegal test of blood or other proteid constituents or secretions of the body. The serum of an animal immunized against human blood will precipitate in certain dilutions besides human blood the blood from not one of the vast number of allied and remote varieties of animals except certain of the higher apes. The relationship between the apes and man, based entirely on morphology, receives suddenly confirmation from an unexpected source. As these precipitins are in a high degree specific, serving to differentiate animals that are not very unlike, this fact indicates strongly not only a common origin of man and the apes, but also that some very peculiar constituent of the blood serum of the common ancestor has passed on unchanged through the widely divergent lines of descendants.

Not only are there differences in the composition and metabolism of different species, but even in a single form there are variations in metabolism that may sum up under certain conditions until they crop out suddenly in what may be called a "chemical sport." A. E. Garrod[1] discusses this matter in an entertaining way in his article on "Alkaptonuria." Alkaptonuria is a peculiar and uncommon condition in which the urine contains homogentisic acid, a substance that is related to tyrosin, from which it is probably derived. Although rare, it is so striking that it is likely to attract attention, for the homogentisic acid has the property of turning dark after exposure to air, and of staining fabrics deeply. Physiologically considered alkaptonuria is interesting in that it seems not to indicate a disease, but is rather an unusual method of metabolism, generally congenital and lasting throughout life. A certain amount of tyrosin does not pass through the usual steps of metabolism, but is excreted in this form, without giving rise to symptoms and seemingly without injury. If present at all it exists in considerable quantities, usually 3 to 5 grams daily, and is never observed in traces. It is distinctly a family disease, for of 32 known instances 19 have occurred in seven families, in which there were altogether but 29 normal members.

Of particular interest in connection with this chemical individuality is the frequency of consanguineous marriages in the immediate ancestry of alkaptonurics, for among 19 cases in which information on this point could be obtained, 60 per cent. were the offspring of marriages between first cousins, and in one the condition was transmitted from father to son. Mendel's law of transmission of characteristics seems to Garrod to offer an explanation. If a tendency to the production of a rare recessive characteristic exists in two individuals the offspring may show the characteristic strongly developed; in marriage of cousins such a rare tendency as this one would be more likely to be present on each side than in ordinary matings. Albinos offer perhaps another instance of similar conditions. Albinism is a chemical phenomenon, depending on a failure of formation of melanin, and it occurs in undue proportion among the children of consanguineous marriages. Retinitis pigmentosa, which in a way is the chemical opposite to albinism, occurs to a remarkable degree among the offspring of cousins. These are all instances of chemical abnormalities that are of such a nature that they can scarcely escape observation. It is perfectly possible that there are many less obvious chemical abnormalities that escape detection. They are interesting in that they indicate that perhaps just as no two individuals are identical in their morphology, so there are differences in their chemistry. Sometimes tendencies are added together by marriage of relatives, and the sum appears in some anatomic peculiarity on the one hand, or as an albino or alkaptonuric on the other. Again, the tendency develops suddenly into a distinct characteristic, and a sport is developed without evident or adequate cause.

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[1] The Lancet, Dec. 13, 1902, p. 1616.

EPILEPSY (?) AND RAILWAY ACCIDENTS.

In recent communications to a railroad paper two experts on railway matters offer their explanation of the too frequent unaccountable accidents that occur. These are generally due to mistakes on the part of the engineer, who, though often long-tried and experienced, may suddenly fail in his duty in the most remarkable way. He may neglect a signal, over-run his time or disobey an order, and the consequence is disaster. The theory adopted by these writers is that locomotive engineers, owing to the nature of their occupation, are especially subject to nervous strain which develops in them a form of epilepsy in which their reasoning power or judgment is temporarily destroyed. One of them states that the concentrated attention required for long periods of time brings about a peculiar nervous disturbance that has many of the external appearances of petit mal. The other expert likewise considers that an epileptic factor is involved. This is bringing into play a serious symptom and seems to us more than is required.

There is no question that certain people under certain special conditions of health or mental strain may have their cerebral mechanism so thrown out of order as to fail them in important crises; a sort of self-hypnotism is perhaps not altogether uncommon. An expert railway man riding over a specially bad piece of road on an engine noticed that the engineer signaled to stop the train. Nothing wrong could be seen, but the man had developed an actual hallucination of sight and thought he saw at a particular spot a boulder across the track. In this case it was overcaution, but in other cases the reverse might occur. Railroad companies are not sufficiently considerate of their employes when they overwork them and subject them to special nervous strain by long hours. It is easy to see how the special faculties of meeting emergencies quickly, etc., may be dulled or even abolished by fatigue. A man who has been excessively overworked can hardly be considered responsible if he sometimes fails in emergencies. The companies should also look carefully into the habits of their employes. The engineer should consider his employment first and use his resting time in such a way that he will be in the best fitted condition for his work. Dissipation in the way of loss of sleep, etc., which may be entirely voluntary on the part of the individual, may lead to disaster.

The traveling public is certainly deeply interested in the matter, and in this country the traveling public includes nearly every one. It is not pleasant to think that one's safety is entrusted to a man who has more demanded of him than his nervous system is capable of performing, or to one who does not duly economize his energies in such a way as to bring about this same condition. The time will come, we hope, when railroad regulations will be so perfected that more careful scrutiny will be kept over engineers, conductors and those in similar responsible positions to insure that they will be at all times mentally and physically fitted for their responsibility. There may be epileptics acting as engineers, as appears to have been the case in some instances, and they should certainly be relieved of their responsibilities, but it is not necessary to drag in such a factor as epilepsy to account for accidents. There are many less formidable conditions which may, under certain circumstances, have equally disastrous results.

COSMOPOLITAN DISEASES IN THE TROPICS.

The concluding chapter of Scheube's translated work of Diseases of Warm Climates is devoted to medical geography, or what the author calls "cosmopolitan diseases." It gives a compendium of the facts, so far as known to the author, of the distribution of certain general diseases, and this has been made the subject of an interesting editorial commentary in the *Indian Medical Gazette* of March, 1903. While most of the so-called cosmopolitan diseases are pretty fairly distributed, there are some decided differences in their range, and some of the comments on Scheube's statements by the editorial writer are worthy of note. The editor thinks there should be a good deal more attention paid to the geographic etiology of disease. The same theories that apply in one country are not by any means always applicable in another. Hepatic cirrhosis, for example, which he thinks may be very properly called "gin liver" in Europe, can not be considered to be due to the same influences in India.

One of the curious facts pointed out by both Scheube and the editor is the absolute absence of scarlet fever in the tropics. While it may be imported into such regions, it never spreads, and it would be interesting to know what special causes in the temperature or otherwise there may be for this peculiarity. Erysipelas, which Scheube considers rare, is not at all unknown in India, and pneumonia, which is unevenly distributed, lacking in some regions, is almost as serious a disorder in Indian territories as it is in Europe and America. At the present day it has come to be more dreaded in some Indian jails and public institutions than even dysentery used to be. Another disease which seems to be lacking in tropical countries is acute rheumatic fever, not chronic rheumatism, and while it occurs, it is by far less frequent among the natives than is the case in other climates.

Sunstroke, which we attribute to temperature, is in fact rare in some tropical countries. Perhaps this may be due to the sanitary habits to which the residents have been educated in regard to it. The *Indian Medical Gazette* rejects Sambon's theory of a specially infectious type, the so-called "siriasis." Scheube fails to recognize insolation as a tropical disease so much as to give it a special chapter, though he notices it among his cosmopolitan disorders. This is a very interesting subject, worthy of close study and offers certain problems that will serve to occupy medical attention when once it is directed to them. A careful study of medical climatology and geography would certainly be suggestive as regards the measures to be taken to meet some of our more obstinate and serious affections. If scarlet fever can not exist in warm climates there ought to be some fact to account for it that might very probably be of utility in its management where it does occur, and similarly with other disorders.

RECENT STUDIES ON SNAKE VENOM.

Contributions from various workers during the past year have revealed important facts concerning the action of snake venom, and incidentally some gain has been made in our knowledge of the chemistry of "immunity reactions."

The important studies made are reported by Flexner and Noguchi in two articles,[1] Calmette,[2] Keys,[3] and recently Keys and Sachs.[4] The work of Flexner and Noguchi[5] has furnished, among others, the following important observations: Venom contains only intermediary bodies or amboceptors (no complement), and alone would not be of great toxicity; the normal serum of susceptible animals contains the substances (complements) which, by a conjoint action with the intermediary bodies of the venom, cause the toxic phenomena; the loss of bactericidal power of the blood of animals poisoned with venom (previously noted by Welch and Ewing) is due to fixation of the animal's complements by the venom; the serum of snakes contains very little complement for its own venom; snake sera owe their toxicity to hematoxin (hemolysin), cobra venom to its neurotoxin, and rattlesnake venom chiefly to a substance which they call hemorrhagin (an endotheliolysin, the effect of which is to impair the vessel walls, causing hemorrhage); the demonstration of toxoids in venom, and a proteolytic ferment. Other valuable observations are made, a good understanding of which demands perusal of the original; but it may be stated that support is added to the Ehrlich side-chain theory, by showing that the neurotoxic principle in venom may be fixed and abstracted *in vitro* by nervous tissue, which duplicates observations with tetanus toxin.

A short time after the first publication by Flexner and Noguchi, Calmette disputed some of their findings in a note to the Académie des Sciences, but he did not clearly grasp the nature of the reactions and substances he described. He made one very important observation, however, to the effect that a normal serum which was heated to 62 C. or above had a strong activating power for venom. As this temperature destroys ordinary complements he had discovered a new substance which he considered to be of the nature of intermediary body.

Keys was able to confirm the claim that cobra venom consisted of amboceptors alone, and, in opposition to Calmette, he supports the observation of Flexner and Noguchi that normal complement will activate venom. He also made the important discovery that the supposed *amboceptor*, or *sensibilisatrice*, as the French have it, of Calmette was in reality another sort of complement, which came into evidence only after normal serum is heated to 62 C. or even to 100 C. Painstaking study of this substance seemed to show conclusively that it is nothing more than the lecithin which is contained in normal serum; and since in certain cases the corpuscles (washed) themselves activate the venom, it was eventually proved (Keys and Sachs) that the lecithin which is bound in the stroma of the red cells also can play the part of complement for cobra venom. Keys and Sachs established clearly the non-identity of normal complement and lecithin complement, and discovered other substances which may act similarly: Kephalin, bile and milk (goat) when heated to 100 C. Their experiments lead them to conclude that probably it is the fatty-acid radical of the lecithin-venom combination which constitutes the active group.

Of the mass of facts marshalled by the different investigators mentioned two are of pre-eminent importance: the presence in the blood of certain complements may be in particular cases, as in venom intoxication, a source of great danger to an individual rather than a protection, and that definite chemical substances may be able to act as complements under certain conditions.

INTELLIGENT COWS.

In an interesting article on the "Milk Supply of Large Towns" in the *British Medical Journal*, March 28, we find the following remarkable statement: "The driver having finished milking, his cow offered to take me into an adjoining room where the milk was cooled, saying that while he fetched the manager I could have a look around." We submit that there has been nothing so remarkable since the days of Balaam. One would think that with such intelligent cows dairy reform would be easy. Notwithstanding the high authority of the *British Medical Journal*, we have our doubts as to the alleged fact.

EXPERT TESTIMONY.

In a recent trial in Detroit the judge criticised the law of Michigan regarding the admission of expert evidence as being defective. A physician was on the witness stand who, as a county official, had made an autopsy and a chemical analysis of stomach contents. In the cross-examination it was attempted to draw out his opinion on certain chemical points as an expert, his testimony having chiefly been as to facts. In response to objections made by opposing counsel the judge said the matter was a simple one; if the witness was not a fully qualified expert he ought not to be thus cross questioned, that the laws of Michigan did not fully cover this question of the admission of expert evidence, and that there should be further legislation on the subject. If we understand the judge's position, it is that there should be some legal regulation as to who is and who is not an expert whose opinion evidence ought to be admitted by the court. Every physician is supposed to know something of chemistry, bacteriology, surgery, psychiatry, etc., but only those who are specialists in these departments can rightly give an expert opinion. It seems to us that this Michigan judge has pointed out one of the most serious defects in our methods of utilizing opinion testimony, and one that, if remedied, would relieve at least medical expert testimony from a great deal of the opprobrium under which it at present suffers. If the law prescribed a certain standard of expertism, if it required any one testifying as an expert to prove that he had a certain amount of actual knowledge of or experience with the subject on which he was to give an opinion, and still more, if it required a recognized professional reputation as an expert in the specialty he professes to practice, there would be less talk of the worthlessness of medical expert testimony. As it is, in most parts of the country at least, any medical practitioner of any school can pose as an expert on any medical subject. This rule of requiring some proof of competency would not necessarily exclude venal experts, but there are fewer of these among those generally qualified than is perhaps supposed. A man with a genuine reputation will not be so ready to risk it for a fee or a series of them. Let legislation be passed rationally defining the qualifications of an expert, even a little arbitrarily, if it is impracticable to do otherwise, and we shall hear less of such tirades against medical expert testimony as that uttered a few months ago by a New York ex-judge. As it is, the legal profession has it in its power to obtain competent and honest expert opinion testimony if it wants it. The trouble is that, too often, it is not the kind it wants.

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[1] Flexner and Noguchi: Journal of Experimental Medicine, March 17, 1902. Univ. of Penn. Med. Bul., November, 1902.

[2] Calmette: C. r. Acad. des Sciences, June 16, 1902.

[3] Keys: Berliner klinische Wochenschrift, Nos. 38, 39, 1902.

[4] Keys and Sachs: Ibid., Nos. 2, 3, 4, 1903.

[5] See also on this subject, THE JOURNAL, April 18, p. 1105, Absts. 48, 49 and 50.

PLANS FOR BUILDINGS FOR THE ROCKEFELLER INSTITUTE.

We understand that the drawing of plans for the buildings of the Rockefeller Institute of Medical Research is imminent. We hope that those in whose hands the decision as to these plans lies will neither make the mistake of indulging in extravagant architecture, nor be guilty of an error, much more common among scientific men, of imagining that the nature of the building and the quality of the materials put into it are matters of insignificance for the success of the foundation. We are all familiar with the lamentable squandering of college bequests in unnecessarily pretentious buildings to an extent that has precluded the acquisition of men of eminence for the faculty and has paralyzed efficiency by failure to provide an adequate budget for maintenance and operating accounts; such misguided expenditure of capital can not be too strongly condemned. But we fear that, in some scientific circles, the value of good buildings of a permanent character and of dignified and sufficiently imposing exterior has been and is insufficiently appreciated. An idea is prevalent among many that a scientific laboratory should be built in so flimsy and cheap a manner that it may conscientiously be torn down and rebuilt to suit more modern conditions in the course of five or ten years. It is further gratuitously assumed that because great men have done and doubtless will continue to do great work in hovels and dungeons with the most meager outfit, that therefore proper housing and the liberal provision of equipment are matters which can safely be disregarded. We grant readily enough that if we had to choose between great men with poor buildings and equipment and mediocre men with elaborate buildings and extravagant equipment, there would be no doubt that we should decide to take the former, but we maintain that wherever possible the great men and ideal facilities should be brought together. Now that the unit system of construction with modifications of it has been introduced there is much less danger than formerly that in the course of a few years a building will become unsuitable for what it has been designed. Besides, the effect of noble surroundings on the investigators themselves has to be thought of as well as the influence of a dignified architecture on the standing and support of an institution in the community. It would be a misfortune, indeed, if the institute now being planned should make that mistake in disregarding the character, quality and location of its buildings which was made in so striking a manner by one of our American universities, a mistake which, in spite of the great men obtained by an otherwise most sagacious president, has led to a hampering of its development, and, in part at least, has been responsible for a threatening of arrest of some of its high functions.

Medical News.

ILLINOIS.

Intending Practitioners.—The State Board of Health, on April 15, 16 and 17, conducted an examination of 181 candidates to practice medicine in Illinois. Of these, 25 were women.

In Memoriam.—At the meeting of the Fox River Medical Association in Elgin, April 14, Dr. James W. Pettitt, Ottawa, delivered an eloquent address eulogistic of the late Dr. Edgar P. Cook of Mendota.

The medical practice act was passed by the senate April 15. The bill would divorce the board of medical examiners from the State Board of Health, which has hitherto held all examinations for physicians' licenses. The bill is not yet passed by the house.

Chicago.

Cook County Internes.—The result of the examinations for interneships in Cook County Hospital was made known April 17. Rush Medical College secured 6 places; Northwestern University 7 places and the University of Illinois 3 places.

Personal.—Drs. Wellington T. and Harry J. Stewart have sailed for Europe.——Dr. John Kercher, in resisting a levy on his property, April 17, shot a constable, and is under bonds awaiting the outcome of the wound. After he had shot the man, learning that he was a constable, Dr. Kercher surrendered to him.

High Mortality.—With one exception the week's mortality is the highest of the year. During the week ended February 28 there were 713 deaths recorded, giving an annual death rate of 19.73 per thousand of population—the highest rate for any February week in the history of the department. Last week 640 deaths were recorded, and the annual rate was 17.69 per thousand. The principal causes of death were pneumonia, 135; consumption, 75; Bright's disease, 52; bronchitis, 39; heart disease, 36, and violence 37. There were 75 more deaths from diseases of the respiratory system and of the kidneys last week than during the week of April 4—an increase of exactly one-third.

Diminishing Deaths Among Young.—The Department of Health, despite the high death rate, finds consolation in the steadily diminishing number of deaths of infants and young children as follows:

> During the six years preceding the present administration of the department there had been 66,003 deaths of those under 5 years of age; during the six years of the present administration, 1896-1902, there have been only 51,046 such deaths, or 14,957 fewer than in the first period. But this tells only part of the story. The population of the city increased, according to the United States census, 3.4

per cent. per annum between 1890 and 1900, and it is fair to assume that the under-5-years population increased in at least the same ratio. It follows that if the death-rate of the earlier period had been continued during the last six years there would have been 87,387 under-5-years-of-age deaths instead of the 51,046 that did actually occur.

MARYLAND.

New Hospital Site.—The first site of Cambridge Hospital has been sold for $2,500, and a new site on a bluff commanding a view for miles of the Choptank River has been purchased. It is expected the new building will be ready for occupation by June 1, 1904.

Baltimore.

Deaths of the Week.—The number of deaths last week was 233 against 176 for the corresponding week last year, an annual death rate per 1,000 of 20.97. Consumption caused 43 deaths, pneumonia 31, Bright's disease 26, and typhoid fever 6.

Reception to Dr. Cordell.—A reception was tendered Dr. Cordell, April 21, by about 50 members of the Medical and Chirurgical Faculty, in commemoration of the completion and publication of the centennial volume, "The Medical Annals of Maryland," which has been in preparation for the past five years. Dr. Cordell gave a résumé of the work. It is a handsome illustrated volume of 900 pages.

Association of Endowed Medical Schools.—It is said that a proposition has been submitted by a representative of Chicago University to found an association of endowed university medical schools, somewhat on the plan suggested by Dr. Barker some time ago. A meeting has been called in Washington next month, but only about half a dozen of the leading schools have been invited. It is understood that Johns Hopkins University objects to this narrow limit.

Oppose Higher Standards.—Opposition is developing in the colleges to the proposed amendment to the regulations of the American Medical College Association raising the standard of preliminary requirements. The effect of this amendment, it is thought, will be to make the standard equivalent to graduation from a high school. At a recent meeting of representatives of the faculties, all present, except the delegate from the Johns Hopkins Medical School, voted to oppose it at the coming meeting at New Orleans.

Personal.—Dr. August F. Volkman celebrated his golden wedding, April 12.——Dr. Benjamin R. Schenck has resigned from the staff of the Johns Hopkins Hospital, and will enter on practice at Detroit, Mich. The vacancy will be filled by Dr. John A. Sampson.——Dr. L. Ernest Neale is in London.——Dr. B Bernard Browne has been seriously ill from an infected wound. He was operated on by Dr. Tiffany, and a mass of glands removed from his axilla.——Dr. John Stephenson, professor of anatomy at the University of Edinburgh, was in the city last week.——Dr. Herman Westphal has gone on a visit to Deer Lodge, Montana.——Dr. J. Clement Clark has resigned the chair of psychiatry at the Woman's Medical College.

MASSACHUSETTS.

Epidemic of Pertussis.—Boston is in the midst of a semi-epidemic of pertussis, especially that portion of the city known as Back Bay. Four deaths were reported last week.

Emergency Ward Opened.—The Visiting Nurse Association of Winchester has equipped a surgery for the treatment of accident cases and for slight surgical dressings, as a first step toward a hospital.

Addition to Hospital.—An addition to the Lynn Hospital, which will be two stories, 83 by 37 feet, to accommodate 17 patients on the lower floor and provide 12 private rooms on the upper floor, has been started.

Faculty Changes.—Harvard overseers have elected Dr. Edward H. Bradford professor of orthopedic surgery, Drs. Maurice H. Richardson, and Herbert L. Burrell professors of clinical surgery, and Dr. John H. McCollom, assistant professor of contagious diseases.

Boston Health.—The report of the board of health for the week ending April 18 shows an annual death rate of 19.57 per 1,000. There were 26 cases of diphtheria reported, with 6 deaths; 25 of scarlatina, with 1 death; 9 of typhoid fever, with 1 death; 28 of measles, with 3 deaths; 25 of tuberculosis, 22 deaths. Pneumonia caused 36 deaths, heart disease 16 and bronchitis 5 There were 76 deaths in public institutions.

Boston City Hospital.—Reports for the year ended Jan. 31, 1903, 8,462 patients treated, with 875 deaths. The daily average was 401 patients. There are 32,152 out-patients. The entire expense was $472,873.54. The south department (contagious) has been many times much crowded A measles ward is the great need there. The relief station in Haymarket square has been a great success. Here, for an expense of $34,-905.24 in the first 11 months, 19,064 out-patients were given first treatment, and 1086 were kept in the wards one or more days, and 765 ambulance calls were answered.

MICHIGAN.

Personal.—Dr. Albert A. Parisot has been elected mayor of Mount Clemens.

Memorials.—At the April 9 meeting of the Wayne County Medical Society, Detroit, suitable resolutions were passed regarding Drs. Peter Klein and Edward W. Jenks, deceased members.

New Medical Building Opened.—The new medical building at the University of Michigan, Ann Arbor, was formally dedicated, April 2, the opening address being made by Dr. Herman Kiefer, Detroit, the former regent.

Physician Assaulted.—Dr. Abram M. Crawford, an aged practitioner of Michigan Center, was assaulted by some person unknown, while sitting in his house, March 30. A deep scalp wound was made, and an artery severed. It is believed that Dr. Crawford will recover.

Most Dangerous Communicable Diseases.—Meningitis was reported in March at 7 places; whooping cough at 51 places; diphtheria at 62 places; typhoid fever at 62 places; measles at 120 places; scarlet fever at 147 places; smallpox at 169 places, and consumption at 189 places. Reports from all sources show meningitis reported present at 2 places less; whooping cough at 5 places more; diphtheria at 15 places less; typhoid fever at 27 places less; measles at 17 places more; scarlet fever at 52 places less; smallpox at 32 places less, and consumption at 4 places less in March than in the preceding month.

Comparative Morbidity.—For March, compared with the preceding month, intermittent fever and typhoid fever were more prevalent; and smallpox, erysipelas, inflammation of bowels and diphtheria were less prevalent For the same month, compared with the average for March in the 10 years, 1893-1902, scarlet fever, smallpox, whooping cough and typhoid fever were more than usually prevalent; and consumption, inflammation of kidney, intermittent fever, erysipelas, inflammation of bowels, and remittent fever were less than usually prevalent. The diseases which usually cause the most sickness in Michigan at this time of the year were slightly less prevalent than usual in the March just passed. This lessened prevalence was apparently due to the higher temperature, and the lessened amount of ozone during the month.

March Mortality of Michigan.—The total number of deaths reported for March was 3,034, or an increase of 278 over the preceding month. The death-rate, however, was exactly the same as for the preceding month, 14.4 per 1000 population. The mortality was slightly higher than for March, 1902. Important causes of death were as follows: Tuberculosis, 237; typhoid fever, 48; diphtheria, 34; scarlet fever, 22; measles, 29; whooping cough, 34; pneumonia, 403; diarrheal diseases, under 2 years, 51; influenza, 140; cancer, 143, and accidents and violence, 150. Comparing March with the preceding month, there was an increase of mortality from all the causes stated above, with the exception of diphtheria, which disease showed considerable decrease The mortality from influenza was nearly double that of the preceding month. The death rate was slightly higher than for March, 1902. There were 3 deaths reported from smallpox during the month, while 5 deaths were returned from this cause for February.

NEW YORK.

Medical Bequests.—The will of the late county judge, Hon. Henry T. Nason of Troy, devises $10,000 to Dr. E. D. Ferguson, in case of the predecease of his mother, and $25,000 in the event of the predecease of his mother and grandfather, and to the Samaritan Hospital, at the decease of his mother $10,000, and an additional amount which will bring the entire bequest up to about $80,000.

Elsberg Bill Killed.—It is alleged that because Senator Elsberg acted independently from the machine in state politics and as a matter of petty spite work and revenge, the machine has killed his bill for the abolition of coroners for Greater New York. The machine Republicans in the senate have disreguided the earnest demands of the citizens of Greater New York, and it is only a question of time when the bill must pass

Opposition to Site for Tuberculosis Hospital—Attorney General Cunneen has been asked to institute proceedings to prevent the establishment of the State Hospital for Tuberculosis Raybrook, on the plea that it was highly objectionable to certain summer residents in the vicinity Mr Cunneen refused to bring such suit, and at about the same time the senate finance committee reported favorably on the appropriation of $115,000 for the support of the hospital at Raybrook

New York City.

Without License.—Nicola D'Amato, an Italian of Brooklyn, was arrested April 6, on the charge of practicing medicine without a license from the board of health The warrant was issued by the registrar of vital statistics

Loomis Lectures on Sanatoria—Dr Henry P Loomis delivered a popular lecture in the United Charities Building on Sanatoria and Climatic Influences in the Prevention of Tuberculosis ' illustrating it with stereopticon views of the leading sanatoria

Thousands for Gouverneur—At the request of the president of the Board of Trustees of the Bellevue and Allied Hospitals, the issue of $125,000 corporate stock for the purpose of completing the construction of Gouverneur Hospital was granted by the board of estimate

Mikulicz in New York—Prof von Mikulicz is in the city as the guest of Dr Fred Kammerer A dinner was given by Dr Kammerer in his honor, and an opportunity was thus afforded of presenting the distinguished foreign surgeon to a number of eminent members of the local profession

Work of Throat Hospital—The Metropolitan Throat Hospital, during a period of thirty years, has been the means of affording free medical assistance to a large class among the deserving poor of New York According to its recently issued report, 27,244 individuals have been received since its foundation, and a total of more than 218,364 visits have been made to its dispensary During the last year, 1,307 patients were treated in the clinics

Garnault Here.—Dr Paul Garnault, the Paris physician who, in June 1901, offered himself for experimentation in order to refute Koch's assertion that tuberculosis can not be transmitted from cattle to man, is now in New York His object in coming here is to deliver a series of lectures on the evolution of Roman Catholicism Speaking of the inoculation experiments made on him by three other physicians, and at the same time, as a control, on guinea pigs, he stated that in 25 days the guinea pigs developed tuberculosis, and died within two months, and that when examined in July by Dr Roux, that savant declared that a local tuberculosis had been set up in Dr Garnault That the process did not become general is attributed to his vigorous health

Buffalo.

Personal—Dr Charles G Stockton is in California ——Dr Charles Cary will spend several months in Europe ——Dr Augustus Pohlman has resumed his work as instructor in anatomy at Cornell University

March Mortality.—The monthly report of the department of health for March shows a death rate of 15 91 per 1,000 The principal causes of death were as follows Pulmonary consumption, 45, cerebrospinal fever, 4, diphtheria, 7, pertussis, 14, typhoid fever, 11, debility, 45, cancer, 24, apoplexy, 18, meningitis, 24, valvular heart disease, 28, pneumonia, 55, appendicitis, 7 cirrhosis of liver, 7, chronic nephritis, 12, and violence, '36 Total deaths 504, as compared to 520 in March, 1902

PENNSYLVANIA.

Car Quarantined.—Smallpox on a Pullman car on an Erie train caused the car to be detached at Meadville and quarantined The passengers were vaccinated

The Typhoid Epidemic at South Bethlehem—About 200 cases of typhoid fever have occurred during the winter at South Bethlehem The epidemic is ascribed to impure drinking water It has been proposed to place a filter in the Lehigh river, but a report on the proposed method, recently made by an expert, expressed disbelief in the filter proposed, and recommended the slow process of sand filtration as the only effective means of purification

Additional Appropriations—In addition to the appropriations to hospitals already mentioned in THE JOURNAL the following appropriations were finally passed by the legislature: Home for the Friendless, $6,000, Temporary Home for the Aged, $3,000; Woods Run Industrial Home, $1,500, all of Allegheny, Home for the Aged, $4,000, Hayes Mechanics' Home, $3,000, German Hospital, $30,000, Orthopedic Hospital $31,000, all of Philadelphia, Corry Hospital, $7,000, Wilkesbarre Hospital, $38,000, and Hamot Hospital, $16,000

Compulsory Report of Communicable Diseases.—A bill was passed by the legislature, and now awaits disposition by the governor, making it a misdemeanor for any physician or other person knowingly not to report, within ten hours, a case of smallpox, diphtheria, or scarlet fever, which may come to his knowledge, providing a fine of from $50 to $500, or imprisonment from ten days to six months, or both, and also making it compulsory on all cities, boroughs and townships to furnish quarantined persons medical aid, necessaries of life, etc

Hospital for Feeble-Minded—Among other bills in the hands of the governor, is one appropriating $50,000 for the selection of a site and the erection of a state institution for the feeble minded and epileptic, to be called "The Eastern Pennsylvania State Institution for the Feeble Minded and Epileptic," and also a bill making it the duty of school directors, trustees or other persons having control of any school or college building, to adopt and immediately to put into operation a modern method and system of disinfection for school or college buildings

To Suppress Smallpox.—The sum of $50,000 asked for by the state board of health has been appropriated by the legislature The amount is largely to be used in the suppression of smallpox Dr Wilmer R Batt, quarantine officer at large, and his assistants, are at work in counties west of the Alleghenies, where the disease is epidemic, establishing quarantine, enforcing vaccination and other measures for stamping it out There are many centers of infection, in Tyler, Clearfield County, about 50 cases of smallpox were found, and no precautions had been taken to prevent the spread, the disease was found in about half a dozen villages, of which Houtzdale was the center, the whole district has been, for the present, quarantined The disease is also prevalent east of the Alleghenies, in Lycoming, Bradford and Susquehanna Counties, where active preventive measures are being instituted In Philadelphia and vicinity the disease is decreasing

An Oil City Feast.—On April 15 the medical profession of Oil City gave a banquet in honor of Dr Miles F Porter, Fort Wayne, Ind, at which Drs Roswell Park, Matthew D Mann and Charles G Stockton, Buffalo, N Y, were guests of honor Dr Clarence W Coulter was toastmaster, and Dr John A Ritchey delivered the address of welcome The following toasts were responded to "What's the Use," Dr Miles F Porter, "The Irregular Physician," Dr William A Nicholson, Franklin, Pa, "Let Us Not Forget the Lessons of Past Years," Dr Roswell Park, "The Regular Physician," Dr John C O'Day, Oil City, 'Early Reminiscences of Gynecology," Dr Matthew D Mann, and "Status Presens," Dr Charles G Stockton Dr Roswell Park touched on the sad condition of affairs existing between New York and the National body, the American Medical Association He expressed the earnest hope of seeing the difficulty completely removed and to see his own state harmoniously in line with the rest Dr Miles F Porter said that, as a member and director of the association, he would do his mite toward effecting this end

Philadelphia.

Public Health and Charities—As authorized by act of the legislature, the city councils have created the new department of Public Health and Charities It is stated on good authority that Dr John V Shoemaker will be director of the new department

Pre-Nuptial Banquet—On the evening of April 18 Dr James M Anders was given a dinner by his brother members of the faculty of the Medico Chirurgical Medical College The toasts, several in number, were with reference to the approaching marriage of Dr Anders

Poisoner Indicted.—Mrs Catherine Danz has been indicted by the grand jury for the murder of her husband by the administration of poison, and George B Hossey, the negro 'herb doctor, was also indicted as an accessory to the crime, for furnishing the poison Expert analysis of portions of Danz's body showed the presence of both arsenic and antimony

Communicable Diseases—A decrease has occurred in the number of new cases of typhoid fever and smallpox, but an increase in diphtheria and scarlet fever. For the week ended April 18, there were, of typhoid fever, 160 new cases, as compared with 204 for the previous week; of smallpox, 10, as compared with 16 the previous week; of diphtheria, 78, as compared with 59 the previous week, and of scarlet fever 89, as compared with 70 the week before. There are under treatment in the Municipal Hospital 72 cases of diphtheria, 134 of scarlet fever, and 70 of smallpox. Nearly all the blame for the epidemic of typhoid fever may be ascribed to bad water. Of the 204 cases occurring during the week ended April 11, 67 were in a portion of West Philadelphia, where the residents receive most of the water supply by direct pumpage from the Schuylkill river.

GENERAL.

End of the Mazatlan Plague.—The city of Mazatlan, Mexico, has had no new cases of plague for some time and business has resumed its usual aspect.

Mikulicz Visits America.—Prof. J. Mikulicz, the famous Breslau surgeon, is visiting America. It is hoped that he will attend the New Orleans session.

Marine Hospital at Nome.—The United States Public Health and Marine-Hospital Service has established a hospital at Cape Nome, Alaska, and the hospital at Dutch Harbor will be discontinued.

Disinfection of Mail.—The postoffice department has issued a general order calling attention to the regulations governing the disinfection of mail matter, because of the prevalence of smallpox and other diseases in certain portions of the country.

Constabulary Medical Corps.—The Philippine Commission has provided for the appointment of three surgeons to the Insular Constabulary, and Drs. Winslow, Wheate and Baker have been appointed. They were formerly captains and surgeons of volunteers, and Dr. Winslow was prominent in the fight against cholera last year.

Recuperation Hospital in Philippines.—General Davis, U. S. A., commanding the Division of the Philippines, has arranged to have a large modern hospital erected near Mariveles at a level of about 3,000 feet. The special object is to provide a place where officers and men who are suffering from the effects of tropical climate may recuperate.

Personal.—Dr. H. C. Sloggett, Honolulu, founder of the Honolulu Eye and Ear Infirmary, former president of the Hawaiian Territorial Medical Association and former president of the Hawaiian Territorial Board of Health, has sailed for Shanghai, China, to become general manager and medical director of the Oriental Life Insurance Company.

Window Memorial for Physician.—A handsome memorial window has been placed in the Center church, Hartford, Conn., in memory of Dr. Horace Wells. The inscription credits him with being the discoverer of anesthesia. The service in the church in connection with the window was attended by the Hartford Medical Society and the Hartford Dental Society and by many physicians and dentists from other cities

The Army Medical School closed its sixth session April 14. The exercises were held in the hall of the National Museum. An address was delivered by John S. Billings, M.D, LL.D., deputy surgeon-general, retired. The diplomas were presented by the Hon. Elihu Root, secretary of war, and the Hoff memorial medal was presented by Gen. William H. Carter, U. S. A., of the War College board, to Assistant-Surgeon Harry L. Gilchrist for the highest average. This is the largest class graduated since the school was founded, in 1893, there being 38 graduates. Of this number the following were honor graduates, having an average of more than 90 per cent.: Harry L. Gilchrist, Samuel M. Deloffre, John W. Hanner and Edward M. Talbott. Most of these young medical officers have already been ordered to the Philippine Islands for duty The following first lieutenants and assistant surgeons were the other graduates:

George H. R. Gosman, Reynold M. Kirby-Smith, William H. Moncrief, George L. Collins, Nelson Gapen, William T. Davis, Charles F. Morse, Samuel E. Lambert, Haywood S. Hansell, Junius C. Gregory, Jay W. Grissinger, Will L. Pyles, Thomas Devereux, William M. Smart, Robert H. Pierson, Cary A. Snoddy, Harry S. Purnell, Robert M. Blanchard, James Bourke, Louis C. Duncan, John A. Clark, Samuel J. Morris, Noel I. Barron, Jacob M. Coffin, Levy M. Hathaway, Alexander Murray, Philip W. Huntington, James D. Fife, William A. Powell, Leon T. LeWald, Jesse R. Harris, George H. Scott, Edwin D. Kilbourne, Robert L. Carswell.

U. S. Regional Death Summary.—The death map prepared by the Census Bureau shows some interesting facts as to the geographical distribution of diseases. For example, affections of the lungs are most common along the Atlantic coast from New York to Virginia and along the Mississippi River from Missouri to the Gulf. Typhoid fever and malaria are naturally rare in mountainous districts, but are at the head of the list in North and South Carolina, Georgia, Alabama, Mississippi, Arkansas and Indian Territory. Sensational deaths occur most frequently on the Pacific Coast. In the state of Washington gunshot wounds are a prevalent cause of death. On the Pacific Coast heart disease, suicide, apoplexy and alcoholism claim more victims than in other sections of the country. A general statement is made that three out of every 100 die of old age, but in a few districts old age is almost as important a cause of death as consumption or malaria. These places are the Catskills, Adirondacks, Green Mountain, parts of Michigan and Wisconsin and the region bordering on the Missouri River. In mountainous districts, cancer, heart disease and apoplexy are more common than on level ground. Croup and whooping cough appear to be most dangerous in the most thinly-settled districts As a general proposition, most deaths in the country are caused by climatic conditions, while those in cities are largely caused by social conditions. The map makes an interesting study for the physician.

FOREIGN.

Lannelongue Endowment at the Paris Academie des Sciences.—Professor Lannelongue has presented a fund to the Académie representing an annual income of $240.

French Hygienic Mission.—Dr. F. Gallard of Paris has been sent to this country by the minister of commerce and industry to study the hygiene of the working classes in the manufacturing centers here, from the double point of view of the professional environment and administrative assistance, that is, medical and hospital aid.

Agricultural School for Nervous Children.—Dr. Strohmayer, a prominent neurologist at Jena is director of an educational institution recently opened there for nervous and feeble-minded children. The raising of fruit, flowers and vegetables and forestry will be taught both theoretically and practically by teachers trained for the task.

Defective Acoustics in the New Paris Academie de Medicine.—The committee on remedying the defective acoustic properties of the new hall, recommend carpeting the hall, stretching threads across under the glass ceiling, substituting thinner panes of glass when any are broken, hanging tapestry or curtains along the walls and behind the platform, and curtaining off the boxes.

An Experiment in Switzerland.—The "Gazette Med. de Paris" states that Zurich is now debating a scheme to establish medical guardians of the public health. It is proposed to tax every individual over 18 at the rate of 80 cents a year. This will supply a sum sufficient to retain the services of forty physicians, who will watch over the maintenance of the health of the populace.

Milk Exposition at Hamburg.—In connection with the approaching Milk Exposition at Hamburg several works have been published dealing with the care of milk from various standpoints. The largest is entitled "Die Allgemeine Milchkunde," and contains everything known to date on the subject of milk and milk hygiene for the use of families, milk dealers, farmers, physicians and others.

Medical Censorship of Charlatans' Ads.—A German publishing house, A. Scherl, has officially applied to the German Medical Press Association with the request that it would pass judgment in dubious cases on the advertisements of applicants, whether they should be rejected as quack ads or not The association unanimously resolved to accept the proffered control and place their services at the command of the firm in the matter.

Prizes Awarded from the Pettenkofer Endowment.—A diploma and prize of $190 has been awarded by the committee in charge of this fund at Munich to three scientists. The first is Dr. Karl Flügge, director of the Institute of Hygiene at Breslau, as a token of appreciation of his works on formaldehyd disinfection and the transmission of phthisis by droplets expelled in sneezing, coughing and speaking. The second recipient is Dr. Dunbar, director of the similar institute at Hamburg, for his research on the so-called biologic cleansing process. The third is Dr. Ohlmüller of Berlin for his method of ozone purification of water.

Anti-Alcohol Congress.—The International Anti-Alcohol Congress opened in Bremen April 15. Secretary von Posadowsky-Wehner, in his opening address, said that the increased strain due to the advance of civilization encourages the use of stimulants. Legislation is not the real remedy for the abuse of alcohol. Education of the people to a higher sense of morality is the remedy. Dr. Delbrueck, Bremen, was elected president. Professor Legrain of Paris, speaking on "Alcoholism and Tuberculosis," said that the use of alcohol predisposes the human system to tuberculosis, and also prevents the cure of it. Alcoholism intensifies the effect of diseases which create those conditions which are best fitted for the ravages of tuberculosis. Since the triumph over alcoholism, he continued, is approximately a triumph over tuberculosis, the real, individual and social treatment for tuberculosis consists in the strictest abstinence from alcoholic liquors. A lively discussion ensued.

The Battle of the Clubs.—The sick benefit societies at Stralsund surprised their medical officers, who had just resigned in a body, by granting their modest demands, and peace reigns once more. The physicians connected with the Mülhausen Kassen have recently asked for an increase of 16 per cent. over the present rates of 50 cents per capita and $1.50 per family. As the request was refused, they have all resigned. No change has occurred in the state of affairs at Gera, but our German exchanges still bear the display ad: "Physicians, do not go to Gera. Colleagues who are thinking of treating with the Textile Industries Kassen at Gera are requested to apply to Dr. Schrader, Gera, Reuss, or to Dr. Hartmann of Leipsic-Connewitz, president of the Leipziger Wirthschaftlicher Verband." The Verband mentioned is the "Union for Promoting the Material or Economic Interests of Physicians in Germany," to which we have often referred. It is stanchly supporting the physicians in their position. The Gera resignations were on purely ethical grounds, refusal to co-operate with a "nature healer" as a member of the medical staff on the same terms as the rest.

LONDON LETTER.

The Polyclinic.

The annual meeting was held on March 31. Sir W. Broadbent, the president, pointed out the gratifying progress of the institution, the number of members having risen from 825 in 1901 to 941 at present. A composite course of lectures on medicine and surgery has been organized and on payment of a fee of $5 a member may attend these lectures, one of which is delivered daily. The fee for non-members is $10. Many valuable additions have been made to the Hutchinson Museum and the whole collection has been so classified and arranged as to permit of speedy and easy reference. A companion catalogue has been published in the "Polyclinic." The financial report of the institution is not so satisfactory: the balance sheet for the year shows a deficiency of $2,000. The annual subscription of members ($5) and the fees charged for tutorial classes are not sufficient to meet the working expenses, and appeals to the charitable public for support have not been as successful as was hoped. They regard the institution as a doctor's affair and think it should be supported by the profession. As no hospital is attached, it does not appeal to their imagination. Sir W. Broadbent said that he never ceased to hope that, sooner or later, a properly equipped hospital would be acquired. A proposal was made to raise the annual subscription to $10.

Treatment of Trachoma by the X-Rays.

At the Ophthalmological Society Mr. M. S. Mayou, in describing this method, pointed out that with care the amount of reaction could be regulated. Even prolonged exposure of the globe to the *x*-rays was attended only by such trifling bad results as falling out of the lashes and conjunctivitis. Experiments on rabbits and frogs showed that the *x*-rays did not bleach the visual purple. The technic of the treatment consisted in everting the eyelids (the operator's hands being protected with bismuth ointment and cotton gloves), the cornea was exposed only when severe pannus was present. The infiltration set up caused difficulty in deciding when treatment should cease. The advantages of the treatment are: (1) less resultant deformity, (2) painlessness, (3) more thorough clearing of pannus.

Mr. Hutchinson on the Plague in India.

While engaged in his tour of investigation of leprosy in India, Mr. Hutchinson, as might have been expected, has found many subjects which have engaged the attention of his versatile intellect. Writing from the town of Amritzur, in which in the past week 731 persons had died out of 1,076 suffering from plague, he comments on the remarkable absence of anything like panic in the cities of India. In Lahore, the city which he had just left, the mortality was 390 out of 833 cases. The little town of Taran-tara, with a population of 4,000, a resort of pilgrims, he found comparatively deserted, its narrow streets closed and marked with a long bar of white paint, showing that deaths from plague had occurred in them. In many instances whole families had been carried off; the mortality was 95 per cent. Yet business was going on as usual, and a long string of pilgrims on foot, in carriages, or mounted on camels was passing through its narrow streets. The procession was miles in length, and had very properly been forbidden by the government, but the authorities were not strong enough to prevent it The natives are absolutely careless as to precautions, though willing enough to run out of a house in which the disease occurs. Mr. Hutchinson fears that the disease will soon have established itself over the whole of India. Isolation is impossible. The natives will not permit removal of their relatives and often will not seek skilled advice. When several cases have occurred in a house they take alarm and desert the patients, leaving the burial and disinfection to be done by others, but they will give no assistance to measures of precaution. Their religious principles prevent them from killing rats or being in any way accessory to their death. They will catch them alive in traps, take them a distance and let them loose, not improbably in some one else's garden. In order to meet the prejudices of the natives rewards are offered for live rats, which are fed and housed. At Amritzur they are kept in a large room with a stone floor and fenced with wire and liberally fed. But the confinement and inability to burrow does not suit them and they soon die. The inhabitants of the district object to this "rats' hell" in their midst, and another site will have to be found. The physicians and other Europeans exposed to the plague have received prophylactic injections of serum. The results are painful, and a severe rigor, temperature of 104, and distressing lassitude follow. In the natives the reaction is less severe. Great confidence is placed by the physicians in the efficiency of the injections, as well as in the use of immunized blood serum in the treatment of the disease.

Tetanus After the Subcutaneous Injection of Plague Serum.

The natives require much persuasion to submit to prophylactic injections of serum, and the lamentable accident which occurred last November and which we have described (The Journal, January 31), was eagerly published by the native press and did much to confirm their prejudices. The following are additional particulars: Nineteen healthy young natives were injected on the same occasion from a bottle of Haffkine's fluid All developed symptoms of acute tetanus on the fifth day, and died within a few days. Other bottles in the same consignment were innocuous. The operator was well skilled and careful and all the usual precautions were observed. In the district tetanus is common. Hence contamination probably took place on the spot. Perhaps it resulted from the syringe and not from the fluid.

Correspondence.

The Mosquito as a Carrier of Disease.

Vera Cruz, Mexico, April 12, 1903.

To the Editor:—In The Journal, April 4, appears an article by Dr J. Stebbins King on "The Mosquito as a Carrier of Disease." In this article Dr. King makes the following statements:

1. . . . Hundreds of non-immunes are bitten every year by infected culex mosquitoes where yellow fever exists as an epidemic and do not take the disease."

2. . . . Non-immunes can be exposed for days and months to yellow fever, and that, too, in the presence of infected culex mosquitoes, and not take the disease. . . .

3. The Doctor does not so state, but implies, that the mosquito is not the only means of transmitting yellow fever.

4. The writer, . . . can most positively vouch for the truth of every statement here made [in his article].

In reply to these four statements, it is well to mention the fact that it is impossible to prove whether a mosquito is infected with yellow fever or not without trying to inoculate a non-immune with the suspected insect. No microscopic or bacteriologic examination is of the least value, as nothing has been found in the infected insects that is of the least diagnostic importance. Unless the Doctor had control of the mosquitoes and tried them out on the non-immunes he can hardly vouch for the truth of his first statement.

In regard to his *second statement*, *it* is absolutely false, so far as the non-immunes being exposed to infected culex mosquitoes. Drs. Reed, Carroll and Agramonte demonstrated beyond a doubt that infected mosquitoes would infect non-immunes, and the same thing has been further demonstrated here in Vera Cruz. If there are any non-immune doubters that have to be shown this fact and have an infected insect feed on them, they can be accommodated at any time. The reason why non-immunes can be in constant attendance on yellow fever patients and not contract the disease is only explained by the mosquito transmission theory. The mosquito can not transmit the disease until ten or twelve days after biting the infected patient. In that time the patient is convalescent, the *room disinfected* and aired and, in all probability, the infected insects killed or driven over to the neighbor's house.

It is very probable also that the patient is covered with a mosquito bar and the nurse, through human instinct, *exterminates* all *mosquitoes in sight*.

As to the third statement, the Doctor only implies that there is some other means of carrying the infection, yet does *not* advance either a fact or theory as to the means. I have seen yellow fever produced by the mosquito inoculation and also by the injection of blood from a person suffering from the disease into a non-immune. I have seen yellow fever fail to develop in three non-immunes who were confined in a mosquito-proof room with a man suffering from a severe case of yellow fever, and who remained in the room throughout a period of four weeks. I have had numerous cases during the past year in which non-immunes nursed yellow fever cases and did not contract the disease, and the *only precaution taken* was to screen the room and keep the patient under a good mosquito net I had one case in which a mother nursed a 2-months-old baby during the first four days of her attack of yellow fever—and only ceased because the secretion of milk stopped—the child staying in the bed with its mother *throughout the whole* course of the disease, yet did not contract yellow fever, the room being entirely free from mosquitoes. The experiment was tried here of giving to a non-immune, whose stomach had been previously emptied, twenty-three infected mosquitoes in a capsule, without any effect whatever.

The complete extermination of the fever in Havana through the destruction of the stegomyia should carry some weight with the thinkers, and such an article as that written by Dr. King can only cause doubt in the minds of men who are not acquainted with the facts in the case.

If Dr. King or anybody else has any theory, fact or suggestion as to any other means of transmitting yellow fever, they will confer a favor by making it known, as there are many men in yellow fever communities and elsewhere who would gladly demonstrate the truthfulness of such a theory or suggestion. The Mexican government, the Marine-Hospital Service and the state boards of Alabama, Louisiana and Texas have accepted as proven the mosquito transmission theory, and their quarantine laws are based on this fact.

Let those who doubt refrain from publishing assertions until they can prove one little fact about their other means of propagating the disease, for such articles only produce doubt in the minds of those living within the infectible territory of the United States, and cast reflections on the work of the best men in charge of our quarantine system.

Samuel H. Hodgson, M.D.,
Acting Assistant Surgeon, U. S. Marine-Hospital and Public Health Service. Last six years residing and practicing in a yellow fever epidemic.

Typhoid Perforation Data Wanted.

Nashville, Tenn., April 17, 1903.

To the Editor:—I desire to request any surgeon who has operated for intestinal perforation or peritonitis in typhoid fever, to send me the data of the cases and reference, if they have been published, under the following heads: Age. Sex. Severity of the fever. Symptoms of perforation. Abdominal signs. Date of disease when perforation occurs. Length of time after perforation before operation. Leucocytosis (if any tests). Description of findings at operation. Site of perforation. Result. Remarks.

I have collected 261 cases in the literature, and feel sure that many more have remained unfound or unreported. For the purpose of a complete statistical investigation of this important surgical problem, I respectfully request the above reports at as early a date as possible.

W. D. Haggard

Marriages.

T. E. McMurtrey, M.D., to Miss Grace Polglase, both of Chicago, April 15.

Herman D. Peterson, M.D., to Miss Marie Freeman, both of Chicago, April 20.

Leighton P. Allen, M.D., to Miss Frances Ideson, both of Oshkosh, Wis., April 15

Daniel W. Rogers, M.D., Chicago, to Miss Helen S. Wainwright, at Chicago, April 14.

James Lang Lewis, M.D., Lawton, Okla., to Miss Elizabeth Shaw of Chicago, at Joliet, Ill., April 21.

Guy B. Van Zandt, M.D., Montrose, Ill., to Miss Lucille Cuddy of Allan Reed, Texas, at St. Louis, Mo., April 9.

Deaths.

Isaac W. Fink, M.D. St. Louis Medical College, 1854, a member of the American Medical Association, Mississippi Valley Medical Association, Illinois State Medical Society, Central Illinois Medical Society and for several years president of the Montgomery County Medical Society, died at his home in Hillsboro, Ill., April 14, from paralysis, after an illness of seven months, aged 78.

Edmund Ludlow, M.D. Northwestern University Medical School, Chicago, 1895, formerly interne at St. Luke's Hospital, Chicago, and at the Central Indiana Hospital for the Insane, Indianapolis, who left his home in Paxton, Ill., in search of health, going first to Silverton, Colo., and then to Los Angeles, died in the latter city, April 5.

William S. Whitwell, M.D. Harvard University Medical School, Boston, 1872, of New York City, a member of the American Medical Association, died at the Riverview Sanitarium, Fishkill Landing, of which he was proprietor, from Bright's disease, April 8, aged 57.

Hugo Lupinski, M.D. University of Michigan, Ann Arbor, 1882, a member of the American Medical Association, for several years health officer of Grand Rapids, Mich., died at his home in that city, April 7, after an illness of two weeks, aged 44.

George W. Westlake, M.D. Medical College of Ohio, Cincinnati, 1866, a member of the American Medical Association, coroner and public administrator of Tehama County, Cal., died suddenly from heart disease in his office at Red Bluff, April 4, aged 59.

William M. Carothers, M.D. University of Pennsylvania, Philadelphia, 1890, of Braddock, Pa., died, April 12, at the Western Pennsylvania Hospital, Dixmont, from organic disease of the heart after a prolonged illness, aged 45.

Isaac S. Tanner, M.D. New York University, 1845, a surgeon in the Confederate service during the Civil War, and a resident of Shepherdstown, W. V., for more than half a century, died at his home, April 9, from paralysis, aged 85.

Bernard Stuve, M.D. Ohio Medical College, Cincinnati, 1851, who retired from practice in 1868 to practice law, died at his home in Springfield, Ill., April 11, from disease of the stomach, after an illness of a year, aged 73.

Gustave E. Sussdorff, M.D. Long Island College Hospital, Brooklyn, N. Y., 1866, of San Francisco, died at St. Mary's Hospital in that city from pneumonia, April 4, after an illness of one day, aged 60.

Hobart Cheesman, M.D. New York University, 1878, for the last twenty years one of the chief examiners of the Equitable Life Assurance Society, died at St. Luke's Hospital, New York, April 11, aged 58.

H. N. Coomer, M.D., of Ashley, Ohio, who had practiced for more than forty years in that locality, and had been for seven years past health officer of Ashley, died, after a long illness, April 1, aged 70.

Samuel P. Timmons, M.D. University of Louisville, 1896, who was compelled to move from Louisville to Texas a year ago on account of failing health, died at Graham, Texas, April 6, aged 38.

William A. Durrie, M.D. Yale Medical School, New Haven, Conn., 1846, of East Orange, N. J, who retired from active practice in 1884, died at his home, April 8, after a short illness, aged 81.

H. Cushman, M.D., of Stromburg, Neb., a member of the American Medical Association, died at his home, April 8, from pneumonia, after an illness of four days, aged 65

L. Gideon Archambault, M.D. Ecole de Medecine et de Chirurgie, Montreal, P. Q., 1869, died at his home in Woonsocket, R. I., April 8, from diabetes, after a long illness.

Guy Bryan Miller, M.D. College of Physicians and Surgeons, New York, 1898, formerly house physician at St. Luke's Hospital, died in Paris, France, April 7, aged 30.

George M. Silvers, M.D. College of Physicians and Surgeons, New York, 1878, died at his home in Chicago, April 15, from pneumonia, after a brief illness, aged 43.

Chauncey Ayres, M.D. Yale Medical School, New Haven, 1831, the oldest alumnus of that institution, died at his home in Stamford, Conn., April 14, aged 95.

Henry D. Kerfoot, M.D. Bellevue Hospital Medical College, New York, 1870, died at his home in Berryville, Va., April 9, after a protracted illness, aged 57.

J. C. Stone, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1890, of Madison, Ga., died in a sanatorium at Atlanta, March 30, aged 38.

James D. Craig, M.D. Hygeio-Therapeutic College, New York, 1858, died at his home in Rogers Park, Chicago, April 13, from pneumonia, aged 70.

John A. Evans, M.D. Missouri Medical College, St. Louis, 1882, died at his home in High Hill, Mo., April 8, from disease of the stomach, aged 41.

T. W. Keith, M.D. Memphis, 1902, died at his home in Downing, Texas, from pneumonia, April 14, after an illness of six days, aged 36.

William H. Curry, M.D. University of Maryland, Baltimore, 1866, died suddenly at Baltimore, April 10, from heart disease, aged 61.

Thomas S. Jones, M.D. University of Pennsylvania, Philadelphia, 1868, died recently at his home in Shelbyville, Ind., aged 60.

Joel J. Walker, M.D. Louisville Medical College, 1878, died at his home in Hot Springs, Ark., April 9, after a prolonged illness.

Anna T. Mills, M.D. Woman's Medical College, Chicago, 1882, died from pneumonia at her home in Vinita, I. T., March 16.

Hugh Marshall, M.D. Rush Medical College, Chicago, 1852, died at his home in Monmouth, Ill., April 11, aged 77.

Charles A. Wunsch, M.D. Cleveland Medical College, 1867, died at his home in Saranac, Mich., April 8, aged 77.

James M. Tomlinson, M.D., Paris, France, died at his home in Indianapolis, April 9, from apoplexy, aged 81.

L. M. Bray, M.D., Toone, Tenn., died suddenly from apoplexy at his home, April 11, aged 75.

N. P. Givens, M.D., of Bowie, Texas, died April 5, aged 60.

Deaths Abroad.

Thomas Maclagan, M.D., who died recently, was, like many men who had attained eminence in the practice of medicine in England, a Scotchman. Though not on the staff of any hospital and, therefore, not a consultant in the ordinary sense, he had a very high-class practice. One of his patients was Thomas Carlyle. His success depended entirely on his sterling qualities. According to Sir F. Treves, "He was one of the most successful practitioners in London. He knew his work; he was one of the kindest and most sympathetic of men; he was rigidly upright and punctiliously honest." His salicylate treatment of rheumatism first brought him into prominence with his professional brethren. As long ago as 1876 he wrote what is curiously in accord with the most recent pathology: "Rheumatic fever is regarded as being produced by some cause or agency generated within the body. My investigations have led me to reject this view and to adopt the old 'miasmatic' view, according to which the cause is introduced from without." As the cinchonaceæ grow plentifully in malarious regions, he argued that possibly some plant which grew plentifully in regions where the rheumatic miasm prevailed would prove effective, and was led to try the salicaceæ. Decoction of willow-bark had been known as a cure for rheumatism long before, but in modern times Dr. Maclagan was the first to point out the value of salicin, which later was supplanted by the salicylates.——**Luciano Armanni, M.D.** University of Naples, 1861, professor of pathologic histology in the University of Naples, founder and director of the institute of pathologic anatomy connected with the Hospital for Incurables, died, after a long and painful illness, from disease of the lungs, March 15, aged 64.——**Emma Constance Stone-Jones, L. S. A.**, London, 1889; M.D. and Ch.M., Trinity College, Toronto, died recently at her home in Melbourne, Australia, aged 46.——**B. Von Kahlden**, professor of pathologic anatomy at Freiburg, died recently from apoplexy.

Book Notices.

The Diseases of Warm Countries. A Handbook for Medical Men. By Dr. B. Scheube, State Physician and Sanitary Adviser, Greiz. Translated from the German by Pauline Falcke, with Addenda on Yellow Fever, by James Cantlie, M.B., F.R.C.S.; and on Malaria, by C. W. Daniels, M.B., M.R.C.S. Edited by James Cantlie, M.A., M.B., F.R.C.S., D.P.H., Lecturer at the London School of Tropical Medicine. With All the Original Colored Maps, Charts, Illustrations, Etc., Together with Many Additional Plates, from the *Journal of Tropical Medicine*. Second Edition, Revised. Cloth. Pp. 594. Price, $8.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

This translation of Scheube's work is a valuable accession to the medical literature of the English language. It has had but one predecessor on the subject, and that is the comparatively small work by Manson. This is decidedly the more valuable work. Of course, the text is a little behind the times, but that has, to a certain extent, been made up by the addenda to the chapters on some subjects and in which a brief summary of the chief recent advances in our knowledge of malaria and yellow fever is given. A specially valuable feature of the work is its bibliographies, which brings the literature up to within a comparatively few years. It would have been better had the book been revised and annotated instead of merely translated, and we hope that in future editions this will be done. With a thoroughly detailed editing we know of no work that would be its superior and but few that are to be compared with it on its special subjects.. The translation has been well done.

Diseases of Women. A Clinical Guide to Their Diagnosis and Treatment. By George Ernest Herman, M.B. Lond., F.R.C.P., Obstetric Physician to and Lecturer on Midwifery at the London Hospital. With Upwards of 250 Illustrations. Revised Edition. Cloth. Pp. 884. Price, $5.00 net. New York: Wm. Wood & Co. 1903.

The object of the present volume, the author says, is to furnish a convenient manual for the student and practitioner and not a manual of reference for the specialist. It seems to us that Dr. Herman has succeeded very well in his purpose. He says he thinks he has one qualification for writing such a book, viz., clinical experience. That is certainly an important qualification. While the book is not strictly original in its treatment of the subject, it seems to be the result of good observation and, as might be expected from the preface, is not overloaded with references to the literature or quotations from other authorities. There is nothing specially novel in its classification. The illustrations are schematic, but generally excellent for the purpose; we believe that schematic illustrations are, as a whole, better for the student than the elaborate attempts at reproducing actual conditions and anatomic structures. There is not the reference to American authors and their work that one would look for, and some valuable contributions to gynecologic technic, etc., by American authors is not mentioned.

Harrington's Hygiene. A Manual of Practical Hygiene for Students, Physicians and Health Officers. By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Second Edition. Revised and Enlarged. With 113 Engravings and 12 Full-Page Plates in Colors and Monochrome. Cloth. Pp. 755. Price, $4.25 net. Philadelphia and New York: Lea Brothers & Co.

It is not long since we noticed the first edition of this work. The second appears with some valuable additions and a general revision The principal additional matter is a chapter on the relation of insects to human diseases, a subject which has come very much to the fore within the last few years. The author's statements on the harmlessness of liqueurs or cordials, with the exception of absinthe, is not in accord with the latest French pronouncement on the subject, which, we think, must be based on as full testimony and study as any that the author has given to it. Aside from their alcoholic content, if we are not mistaken, liqueurs are declared by French authority to be decidedly harmful in themselves. Taken as a whole the book, we think, will maintain the popularity the former edition has received.

The American Year-Book of Medicine and Surgery for 1903. A Yearly Digest of Scientific Progress and Authoritative Opinions in All Branches of Medicine and Surgery, Drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators. Arranged, with Critical Editorial Comments, by Eminent American Specialists. Under the Editorial Charge of George M. Gould, A.M., M.D. In Two Volumes. Volume I, Medicine. Volume II, General Surgery. Cloth. Price, per volume, $3.00 *net*. Pp. 691 and 670 Respectively. Fully Illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

This year-book keeps up its reputation and gives an excellent résumé of the leading literature in the different departments of medicine and surgery. It holds a high place among the various other compendiums in this line. The illustrations are excellent and add largely to the value of the books, which, so far as we have been able to examine, are trustworthy and full.

Miscellany.

In poisoning by morphin or by coal gas, remember the value of the abstraction of blood followed by saline infusion. In severe cases the addition of this measure to the others employed may be sufficient to save the life.

For Medical Writers.—Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest words possible, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—Ruskin.

Treatment of Gonorrhea Based on the Biologic Properties of the Gonococcus.—V. Schultz contributes to the "St. Petersb. Med. Woch." an article on this subject. He first establishes that the organism seeks to repel the invasion of the gonococci by filling up and obstructing with leucocytes the openings in the mucous membrane attacked and the lymphatics, thus localizing the infection. The cocci find in the leucocytes a nutrient medium peculiarly rich in peptone and in their proliferation in it they generate a toxin which in turn checks their own development. The infection is also blocked by early regeneration and metaplasia of the cellular tissue of the mucosa and the cocci are eliminated in the dead cells thrown off by the tissues. A fifth factor in the struggle of the organism is the febrile temperature, which probably has also an inhibiting influence. He cites authorities to the effect that the toxin generated by the cocci has an injurious influence on the nerves of the region, affecting in time portions of the entire central nervous system. Generally speaking, the columnar epithelium opposes the weakest and the pavement the strongest resistance to the invasion. On account of the penetrating power of the cocci, it is impossible to eradicate them mechanically or chemically unless the entire mucosa down into the submucous layers could be scraped off with them. The sole and entire reliance is, therefore, on the natural processes of defense. They must be promoted in every possible way. As aids in this line, he insists on entire avoidance of all excitement or stimulation of the region, sexual and menstrual. He packs the vagina of his female patients, and forbids them to remove the tampon. He also aims to induce a temporary menopause by intrauterine injections of iodin-alcohol, as recommended by Mackenrodt, Walton and others, or Sänger's method of applying the iodin-alcohol (Volkmann's Sammlung klin. Vorträge, 1890, 1894, 45 and 18, and Cbl. f. Gyn., 1894, 25). To rest the parts as much as possible, he orders his patients to stay in bed during the acute stage or an acute relapse. This is particularly essential during the menstruating period. Food, intestinal functions, etc., must be appropriately regulated, but the local process must be left entirely undisturbed, no instruments, disinfectants or local applications of any kind allowed. The seventh factor in his treatment is simultaneous treatment of the woman's husband if gonococci are discovered in his secretions. A great advantage would be gained if we could devise some way of inducing a local leucocytosis and febrile temperature to enhance the natural processes. Dehio has accomplished this in lupus patients by subcutaneous injection of extracts of the proteins of the prodigiosus and cyaneus bacilli.

A Sensible Veto.—The osteopaths had a vigorous lobby in Salt Lake City this winter, working for a law providing for licensing them to practice in the state on filing a certificate, without undergoing an examination, as is necessary for physicians. They succeeded in getting the bill passed, but it was vetoed by the governor, and failed to pass over the veto The following is Governor Wells' veto message, which we believe is worthy of space in our columns:

VETO OF OSTEOPATH BILL BY GOVERNOR HEBER M. WELLS, OF UTAH, MARCH 16, 1903.

To the Senate:

I herewith return without my approval Senate Bill No. 131, entitled "An Act declaring the practice of osteopathy not to be the practice of medicine and surgery within the meaning of title 52, revised statutes of Utah, 1898, and regulating the practice of osteopathy in the State of Utah."

The saving of human life, whether by means of looking to the prevention of disease or by means calculated to cure disease already established, will be admitted without question to be the proper climax of professional ambition as well as the highest humanitarian desire of legislative enactment. In both these directions the state of Utah, by vigorous sanitary laws and by strict requirements as to the quality of medical practitioners, stands well in the forefront of enlightened and progressive commonwealths.

Only through conviction should we venture to weaken in any degree these safeguards which experience and observation have proven to be beneficent and satisfactory.

PRACTICE OF MEDICINE.

Whatever the term or nature of the tenets of the particular school which this bill aims to recognize, its practice must, it seems to me, be considered a branch of the science of medicine. After all, the physician, of whatever school or designation, has to deal with the same physiology, the same conditions, the same laws of cause and effect in health and disease. All practitioners may not have the same knowledge and the same skill, yet our statutes have wisely provided as a matter of public policy and protection, that a certain amount of skilled knowledge all of them must have.

It requires considerable honesty in any practitioner to admit that a case in hand is beyond his powers. His training may be limited, his pretentions modest; but the consequences of his weakness in refusing to concede it are equally dangerous. The natural treatment of any physical disorder is necessarily determined by a diagnosis of a case—a preliminary of first and absolute importance. To do the wrong thing by performing dangerous manipulations, or to do nothing at all—either of which courses is easily open to the unskilled—may be equally fatal. The peril is not lessened if the physician, perhaps by happy accident or coincidence, has discovered the true condition.

HUMAN LIFE PRECIOUS.

He may be manly enough to confess inability to suggest proper remedies, or reckless enough to attempt treatment of his own altogether without reason or applicability, or indifferent enough, as already suggested, to do nothing at all. In either case the patient suffers the risk. Is not human life too precious to be thus trifled with?

The foregoing suggests that the treatment of disease should not be permitted to be a matter of mere experiment; and inasmuch as the authority to practice presupposed an acquaintance with the science as recognized by all the regular schools, any knowledge short of that should be deemed insufficient. I consider it unfair and dangerous, therefore, to allow the adherents of osteopathy or of any other school to practice without undergoing the ordinary tests to which other practitioners have to submit. The specialist may go so far as his talents and inclination may carry him, and the public be benefited by his advancement, but the fundamental and essential knowledge which every physician ought to have can not safely be waived or ignored.

SAFEGUARDS SWEPT AWAY.

Science is progressive; advancement can not be stayed, in the art of healing least of all; and the dogmatism of disputants, whether in medicine or anything else, must soon yield to the light of truth and reason. Whatever merit osteopathy may have will assuredly find recognition. The present contention is that in the bill before me the necessary requirements and safeguards with which the law surrounds the physically afflicted are thrown down and swept away. To this I am unwilling to consent. No practitioner of this school who possesses the qualifications required of the practitioners of other schools needs such a law. I deem it unwise to enact it for the benefit of those who have not those qualifications. Whenever all who seek to engage in the healing art shall be equally recognized as competent under the regulations now generally established, one medical law will be sufficient. This condition complied with it would give me sincere pleasure to name as a member of our state board of medical examiners an adherent of the very school in whose behalf this piece of legislation is proposed.

Heber M. Wells, Governor.

State Boards of Registration.

The New Oklahoma Law.—The recent Oklahoma legislature passed a new law regulating medical practice in that territory. It provides for a territorial board of health, consisting of three reputable physicians appointed by the governor, one of whom is to be a salaried official with the designation of superintendent and to be ex-officio the secretary. The law provides that the board shall meet every three months, due notice of time and place having been given. Aside from its other duties as a board of health, the board is to examine applications and grant licenses to practice medicine, and the act specifies the following conditions:

Section 5. No person hereafter shall practice medicine or surgery in this territory without first obtaining a license from the territorial board of health. Application for license shall be made in writing, together with a fee of $5, accompanied by a proof of good moral character, and proof of ten years' continuous practice, or proof of graduation from a reputable medical college. When the application has been inspected by the board and found to comply with the foregoing provisions, the board shall notify the applicant to appear for examination at a time and place designated in such notice. Examination shall be made in whole or in part in writing and be sufficiently strict to test the applicant's qualifications to practice medicine. All members of the board shall be present and participate in such examination. It shall be the duty *of the person holding such license to register in the office of the* register of deeds, in a book kept for that purpose, in the county in which person resides or intends to practice. Provided, that an osteopath shall not be required to pass an examination in materia medica or therapeutics.

Sec. 6. Any person practicing or offering to practice medicine or surgery in any of their branches, without first having obtained a license from this board, shall be deemed guilty of a misdemeanor and, on conviction thereof, shall be fined in any sum not less than $50 nor more than $100, or by imprisonment in the county jail for a period of not less than thirty days nor more than six months, or by both such fine and imprisonment at the discretion of the court, and all costs incurred therein.

Sec. 7. The provisions of this act shall not affect the rights of persons now legally practicing medicine, osteopathy or surgery in this territory; nor shall it prohibit the application of domestic remedies by one member of a family to another thereof; nor administering of remedies by another in case of emergency, without compensation; nor shall it apply to any commissioned medical officer of the United States army, navy or marine-hospital service, in the discharge of his official duties; nor to any legal qualified dentist, when engaged exclusively in the practice of dentistry; nor to any physician or surgeon from another state or territory who is a legal practitioner of medicine or surgery in the state or territory in which he resides, when in actual consultation with a legal *practitioner of this territory; nor to any physician or surgeon* residing on the border of a neighboring state or territory and duly authorized under the law thereof to practice medicine or surgery therein, whose practice extends into the limits of this territory: Provided, that such practitioner shall not open an office or appoint a place to meet patients or receive calls within the limits of this territory; nor to any osteopath who shall pass examination in the subject of anatomy, physiology, obstetrics and physical diagnosis in the same manner as required of other applicants before the territorial board of health, and who has thereupon received a certificate from the board which, when filed with the register of deeds, as is required in the case of other certificates from the board, shall authorize the holder thereof to practice osteopathy in the territory of Oklahoma, but shall not permit him to administer drugs nor to perform major surgery.

Association News.

THE SESSION AT NEW ORLEANS.

More Announcements Concerning the Fifty-Fourth Annual Session.

Full particulars of the rates and routes to New Orleans were given in the New Orleans Number, April 11.

Another special train is announced. The Chesapeake & Ohio Railroad special will leave New York at 4:55 p. m., Saturday, May 2, pass through Philadelphia and Washington and arrive at Hot Springs, Va., the next morning. The day will be spent there, the physicians being the guests of Mr. Fred Sterry, manager of the Homestead Hotel. Leaving Hot Springs Sunday night, the party will proceed to Louisville, where it will join other excursions on the Illinois Central. Those desiring to join this party should communicate with the agents of the road.

The Cuba Excursion.

A correspondent asks for further information concerning the trip from New Orleans to Cuba. He says: "Will you kindly state: 1, The time of arriving at Cuba; 2, if one may stay over one week and take steamer back on its second trip; 3, if $50 includes board and berth while on boat."

To this we answer: 1 Boats leaving New Orleans every Saturday arrive at Havana Monday, and leaving Havana Tuesday arrive at New Orleans Thursday. All schedules are subject to change, of course. 2. Yes, or two weeks, provided that will allow you to return home within the limit of your railroad ticket, May 30. Remember to extend your railroad ticket at New Orleans on or before May 12. 3. Yes.

Stomatology Meeting Place.

The meetings of the Section on Stomatology will be held in Touro Synagogue, Carondelet street, near St. Joseph street, instead of the location first announced.

Value Not Measured by Dollars and Cents.

The editor of "Merck's Archives" says that "any physician to whom it is at all possible should make the most strenuous effort to attend the meeting of the American Medical Association; the benefits derived from attending the meetings can not be figured out in dollars and cents; but the broadening of the intellect that comes from association with the best men of the profession from all parts of the country, the knowledge that one gains from listening to the papers and to the discussions, the acquaintances one makes, the social features and entertainments, the freedom from care and worry for a few days, and the *change from the humdrum life of the average practitioner—all* these factors are infinitely superior to dollars and cents, because they make the man a better physician and the physician a better man. So do your best to be at New Orleans on the date named. It is only one fare for the round trip."

Reception of Special Trains at New Orleans.

Those having charge of special trains to the New Orleans meeting of the American Medical Association are asked to notify the Chairman of the Bureau of Information, Dr A. G. Friedrich, 841 St. Charles street, New Orleans, as to where the special train will be from and at what time it will reach New Orleans. Such information should be sent by letter immediately, and also a telegram should be sent a few hours before the special reaches New Orleans, giving the expected time of arrival as near as possible.

House of Delegates.

The House of Delegates will be made up of the following delegates so far as we are advised. Those states not named have not appointed their delegates or have not sent in the names. Several states will be entitled to a larger representation than last year.

Arkansas—Dr. J. A. Dibrell, Little Rock.

California—Dr. H. Bert Ellis, Los Angeles.

Colorado—Dr. C. K. Fleming, Denver.

Connecticut—Dr. C. S. Rodman, Waterbury; Dr. C. E. Brayton, Stonington.

District of Columbia—Dr. George M. Kober.

Florida—Dr. R. D. Murray, Key West.

Indian Territory—Dr. B. F. Fortner, Vinita.

Indiana—Dr. W. N. Wishard, Indianapolis; Dr. D. C. Peyton, Jeffersonville.

Iowa—Dr. J. R. Guthrie. Dubuque; Dr. Samuel Bailey, Mt. Ayr.

Kansas—Dr. J. E. Minney, Topeka.

Kentucky—Dr. J. N. McCormack, Bowling Green; Dr. Thomas Hunt Stucky, Louisville.

Louisiana—Dr. Rudolph Matas, New Orleans.

Massachusetts—Dr. W. N. Swift, New Bedford; Dr. A. G. Minshall, Northampton; Dr. B. H. Hartwell, Ayer. Dr. W. T. Councilman, Boston; Dr. J. C. Warren, *Boston; Dr. H. E. Marion, Brighton.*

Michigan—Dr. H. O. Walker, Detroit; Dr. T. A. Felch, Ann Arbor; Dr. J. B. Griswold, Grand Rapids.

Minnesota—Dr. A. W. Abbott, Minneapolis; Dr. Wm. Davis, St. Paul.

Missouri—Dr. F. J. Lutz, St. Louis.

Montana—Dr. T. J. Murray, Butte.

New Hampshire—Dr. Ira J. Prouty, Keene.

New Jersey—Dr. Chas. J. Kipp, Newark; Dr. Elias J. Marsh, Paterson; Dr. L. M. Halsey, Williamstown.

North Carolina—Dr. E. C. Laird, Hot Springs; Dr. E. B. Glenn, Asheville.

Oklahoma—

Oregon—Dr. Andrew C. Smith, Portland.

Pennsylvania—Dr. William T. Bishop, Harrisburg; Dr. H. S. McConnel, New Brighton; Dr. John B. Roberts, Philadelphia; Dr. Wm. M. Welch, Philadelphia; Dr. Wm. S. Foster, Pittsburg; Dr. Geo. W. Guthrie, *Wilkesbarre; Dr. Alem P. Hull*, Montgomery; Dr. W. B. Lowman, Johnstown.

Rhode Island—Dr. John Champlin, Westerly; Dr. Frederick T. Rogers, Providence.

South Dakota—Dr. J. L. Stewart, Irene.

Tennessee—Dr. Dan'l E. Nelson, Chattanooga; Dr. Louis LeRoy, Nashville.

Texas—Dr. H. A. West, Galveston.

Washington—Dr. Park W. Willis, Seattle.

West Virginia—Dr. L. D. Wilson, Wheeling.

Wisconsin—Dr. W. T. Sarles, Sparta; Dr. Herman Reineking, Sheboygan.

Wyoming—Dr. E. E. Levers, Spring Valley.

Medical Organization.

A Plea for Uniformity.

The importance of practical uniformity in the essential features of organization in every state in the Union is so great, and has so constantly grown on all of those who have had opportunity for observing the work in the states which adopted plans of reorganization last, that an earnest plea is made to those who have the matter in charge in other states not to depart from the Association plan lightly or in the absence of the most obvious reasons for doing so. In fact, one of the prime objects of the movement from the outset was to get rid of the crazy-quilt system, or, rather, the lack of system, which stood in the pathway of every effort at legislative and other reforms in the past and secure such unity of both purpose and methods as would make the voice of the profession effective in securing every desirable advancement. The plan has now been so fairly and successfully tested, under such varied conditions and in widely separated states, as to demonstrate its adaptability to use in any state, and is no longer a matter of experiment.

The four essential features provided in the constitution and by-laws for state societies are so interdependent, so to speak, that no one of them can be cut out without irreparable injury and injustice to the plan as a whole for practical purposes. This is not a matter of experiment either, but the statement is based on the experience and actual results in those states which reorganized last year, but which left out one or more features, usually the House of Delegates, as compared with what has been accomplished in the same time and under very similar conditions in the still larger number of states which accepted it as a whole.

The four essential features of the Association plan, named in the order of their importance, are: 1. The county society as the unit of organization, and the foundation for everything above it. 2. The House of Delegates, composed of a specially selected and limited number of representatives from the county societies, to look after and foster the business, legislative and all material interests of the profession. 3. A Council, to be selected from the profession at large, each to cover a definite territory, and to represent every section of the state, to act for it under well-defined restrictions in the interval between meetings. 4. The General Meeting, composed of all the members of all the county societies who will attend, which can devote its entire time and attention to the reading and discussion of papers and other scientific work as well as social, it being relieved of the miscellaneous business duties which consumed so much time in the past with so little profit, and of the election of officers, which was another fruitful source of distraction and discontent.

If time and space permitted, these features might be profitably elaborated, but this is done so fully in the official constitution and by-laws as to make it less important Others, again, might change the order in which these features or sections of the plan are stated, but when it is understood that the ultimate purpose is to make the county society not only a means of promoting good fellowship and of promoting the material interests of all under its jurisdiction, but of making it, if even in a humble way at first, a post-graduate school, which the General Meeting is in a broader sense for the fortunate ones who can attend it, brought at short intervals within the reach of all.

Now, it is true that much contained in the by-laws, where a wide departure is made from the brevity and compactness of expression observed in the constitution, is explanatory, suggestive and educational in character, and much is embraced which would not be necessary if such an organization as is contemplated was already in existence. In justification for this it is submitted that, under existing conditions, it is almost as important to furnish incentives to this work, to give practical and detailed information as to how it is to be done, and to put the reasons for all of it within easy reach of those who, as councilors and volunteers, will discuss the subject from one end of the country to the other, as to furnish the foundation and framework of the superstructure set forth in the constitution.

After the organization has been accomplished, which will require more time and self-sacrificing labor than is generally understood, anything found obsolete or impracticable can be easily eliminated or replaced by provisions better adapted to needs then existing.

Committees on organization yet to report, and members of state societies which have not reorganized, are urged to give this subject the grave consideration to which it is entitled, and especially are they urged not to change a plan designed and recommended by the American Medical Association for universal adoption, after much labor and expense, merely for the sake of change. Doubtless another committee might have devised something better, but, conceding this to be true, a departure from it now can not be otherwise than a step backward. If the profession of any state is not sufficiently advised or for any other reason is not ready to act favorably on the plan as a whole, it will be far better, in the light of the experience of those states which acted differently, to postpone action for another year. However well intended, any other course is unjust to and is likely to bring discredit on the entire plan of organization, and in the end will work an injustice on the profession of the state where it is done.

J. N. McCormack.

Iowa.

Grundy County.—The physicians of Grundy County met at Grundy Center, April 7, and organized a medical society, with Dr. Eugene A. Crouse, Grundy Center, president; Dr. William N. Moffett, Conrad, vice-president; Dr E. H. Hoefer, Reinbeck, secretary, and Dr. M. H. Theilen, Grundy Center, treasurer.

Kentucky County Societies.

Bourbon County.—Dr. Louis Frank, Louisville, reports the organization of this society with Dr. Wilson G. Daily, Millersburg, president; Dr. Charles G Daugherty, Paris, secretary-treasurer, and Dr. Silas Evans, Paris, delegate.

Hart County.—The physicians of Hart County met, April 15, and organized this society, with Dr. C. J. Walton, Munfordville, president; Dr. Thomas H. Garvin, Horse Cave, vice-president; Dr. Jesse J. Adams, Munfordville, secretary-treasurer; and Dr. B. L. Bruner, Hardyville, delegate.

Crittenden County.—Dr. James H. Letcher, Henderson, reports the perfection of the organization of this society, with Dr. Isaac H. Clement, Tolu, president; Dr. J. William Trisler, Marion, vice-president; Dr. William T. Daughtrey, Marion, secretary, and Dr. J. O. Dixon, Marion, delegate.

Grant County.—The physicians of Grant County met at Williamstown, April 13, and organized a county society, adopting the constitution and by-laws of the American Medical Association, after an address by Dr. Joseph E. Wells, councilor for the adjoining Ninth District. Dr. John M. Wilson, Williamstown, was elected president, and Dr. William Robinson, Corinth, secretary.

Graves County—The physicians of Graves County met at Mayfield, April 14, and, after an address by the president of the state association, organized a county society, electing Dr. John L. Dismukes, Jr., Mayfield, president, and Dr. Milford W. Rozzell, Mayfield, secretary. The constitution and by-laws proposed by the American Medical Association were adopted without change.

Franklin County.—The physicians of Franklin County met at Frankfort, April 15, and organized a county society, after a talk by Dr. Louis Frank, councilor of Louisville district. The constitution and by-laws of the Association were adopted. A list of the officers has not been received.

Livingston County.—The physicians of Livingston County met at Smithland, April 13, and organized a county society, after an address by Dr. James T. Reddick, Paducah. The constitution and by-laws suggested by the American Medical Association were adopted without change. The following officers were elected: President, Dr. Frederick G. LaRue, Smithland; vice-president, Dr. Oliver R. Kidd, Carrsville; secretary, Dr. Edward Davenport, Hampton; treasurer, J. E. Chipps, Birdsville; and delegate to the state association, Dr. John V. Hayden, Salem.

Mississippi.

At its annual meeting held at Vicksburg, April 15-17, the Mississippi State Medical Society adopted the Association plan of organization without a single change. The constitution and by-laws were reported favorably by the committee on organization in 1902, and had lain on the table for a year. It was taken up at the opening of the meeting this year and referred to a large committee, representing every section of the state, which went over the whole matter thoroughly and again made a favorable report. As some of the members did not understand all that proposed, it was read section by section in the society, and then adopted without a dissenting vote.

The state was divided into ten councilor districts, with special reference to lines and convenience to travel for the councilor in each, and the following were appointed as members of the council: E. H. Martin, Clarksdale; K. P. Perkins, Batesville; C. D. Mitchell, Pontotoc; W. M. Paine, Aberdeen; J. A. Crisler, Yazoo City; W. D. Kiger, Brunswick; O. B. Quin, McComb City; J. R. Packett, Meridian; D. J. Williams, Ellisville and H. M. Folkes, Biloxi.

A resolution was adopted, authorizing the secretary, on recommendation of the councilors, to recognize and issue charters to county societies. He was also instructed to procure and distribute to the profession of Mississippi 3,000 copies of the new constitution and by-laws, sending with each of these a copy of the constitution and by-laws for county societies An appeal was made to every reputable physician in the state to join his county society, and through it his state association.

The following officers were elected: President, Dr. Chas. D. Mitchell, Pontotoc; vice-presidents, Drs. Joseph Waldauer, Vicksburg; May F. Jones, Columbus, and C. L. Culley, Jackson; secretary, Dr. J. J. Haralson, Forest; treasurer, Dr. J. F. Hunter, Jackson.

The officers and council were carefully selected with reference to the large amount of work to be done during the next year, and the promise is for excellent results. The medical and health laws of Mississippi are nearly all that can be desired, but their enforcement has been crippled in the past by a lack of unity in the profession. With a good organization almost anything desirable is within its reach J. N. McCormack.

Missouri.

As we go to press information comes that the Missouri State Medical Association, which has been in session this week, has adopted the constitution and by-laws for state societies endorsed by the American Medical Association, with practically no modifications. Thirty-six component societies, with a membership of 1,088, were reported.

Nebraska County Societies.

Brown County.—On April 8 physicians of Brown County met at Long Pine and organized a county medical society, with Dr Harmon P. McKnight, Long Pine, president; Dr. H. A. Brown, vice-president, and Dr. G. O. Remy, Ainsworth, secretary-treasurer.

Nance County.—The physicians of Nance County met at Fullerton, April 8, and organized a medical society to be affiliated with the state and national associations. Dr. Edward Johnson, Fullerton, was elected president; Dr. Charles W. Ford, Belgrade, vice-president, and Dr. Dora M. Judkins, Fullerton, secretary-treasurer.

Tennessee County Societies.

Wilson County.—Wilson County physicians met recently at Lebanon and organized a county society, with Dr. John W. McFarland, Lebanon, president.

Carter County.—The medical profession of Carter County met at Elizabethton, and organized a county society with Dr. J. H. Alexander, Elizabethton, president

Houston County.—This society was organized at Erin, April 6, with Dr. Alfred H. Abernathy, Erin, president; Dr. G. D. Boone, Erin, vice-president; Dr. W. H. McMillan, secretary, and Dr. R. H. Baylor, Erin, treasurer.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, FIFTY-FOURTH ANNUAL SESSION, NEW ORLEANS, MAY 5-8.

Texas State Medical Association, San Antonio, April 28.
Louisiana State Medical Society, New Orleans, April 28-30.
Medical and Chirurgical Faculty of Maryland, Baltimore, April 28-30.
Nebraska State Medical Society, Lincoln, April 28-30.
Illinois State Medical Society, Chicago, April 29-May 2.
Arkansas Medical Society, Jonesboro, April 30-May 2.
Association of American Medical Colleges, New Orleans, May 4.
American Proctologic Society, New Orleans, May 5.
Kansas Medical Society, Concordia, May 6-9.
American Urological Association, New Orleans, La., May 8-9.
American Academy of Medicine, Washington, D. C., May 11-12.
American Therapeutic Society, Washington, D. C., May 11-13.
Oklahoma Territorial Medical Association, Guthrie, May 12.
American Association of Genito-Urinary Surgeons, Washington, D. C., May 12-14.
American Surgical Association, Washington, D. C., May 12-14.
American Orthopedic Association, Washington, D. C., May 12-14.
American Pediatric Society, Washington, D. C., May 12-14.
Association of American Physicians, Washington, D. C., May 12-14.
American Medico-Psychological Association, Washington, D. C., May 12-15.
American Ophthalmological Association, Washington, D. C., May 13-14.
Association of Military Surgeons of the United States, Boston, May 19-21.
New Hampshire Medical Society, Concord, May 21-22.
North Dakota State Medical Society, Bismarck, May 21-22.
South Dakota State Medical Society, Mitchell, May 27-28.
Connecticut Medical Society, Hartford, May 27-28.

Congress of American Physicians and Surgeons.—The sixth triennial session will be held in Washington, D. C., May 12, 13 and 14.

Knox County (Tenn.) Medical Society.—At the annual meeting, at Knoxville, April 2, Dr. Ernest R. Zemp, Knoxville, was elected president.

Cass County (N. D.) Medical Society.—At the annual meeting, held in Fargo, March 30, Dr. Hezekiah J. Rowe, Casselton, was elected president

National Association of United States Pension Examining Surgeons.—The second annual meeting will be held in Washington, D. C., May 13 and 14.

Washington County (Iowa) Medical Society.—At the annual meeting, held in Washington, April 8, Dr. George W. Hay was re-elected president and Dr. Cloyd A. Boice secretary, both of Washington.

Marshall County (Ind.) Medical Society.—At the meeting, held in Plymouth, April 9, Dr. R. Clarence Stephens was elected president; Dr. Adolphus C. Holtzendorff, vice-president, and Dr. Novitas B. Aspinall, secretary, all of Plymouth.

Baltimore Pediatric Society.—A society was organized last week for the promotion of the department of pediatrics. Dr. Charles W Mitchell was elected president, and Dr. Henry M. Fitzhugh secretary. Meetings will be held monthly.

Pulaski County (Ill.) Medical Society.—At the annual meeting Dr. John F. Hargan, Mound City, was elected president; Dr. William C. Rife, Villa Ridge, vice-president, and Dr. A. Willard Tarr, New Grand Chain, secretary and treasurer.

Lyon County (Kan.) Medical Society.—The twentieth annual meeting was held in Emporia, April 7, at which Dr. John M. Parrington was elected president; Dr. Frank Eckdall, vice-president, and Dr. John M Poindexter, secretary and treasurer, all of Emporia.

Howard County (Md.) Medical Society.—At the annual meeting of this body, at Ellicott City, April 7, Dr. John W. Lacy, Lisbon, was elected president; Dr Bernard J. Byrne, Ellicott City, vice-president, and Dr. William B. Gambrill, Alberton, secretary and treasurer.

Lauderdale County (Tenn.) Medical Society.—At the annual meeting, held in Ripley, Dr. Alexander H Young, Ripley, was elected president; Dr. William H. Tucker, Double Bridges, vice-president; Dr. Gustavus A. Lusk, Ripley, secretary, and Dr. W. D. Miller, treasurer.

Jefferson County (Ark.) Medical Society.—This society, at its annual meeting at Pine Bluff, April 8, elected Dr. William H. Blankenship, Altheemer, president; Dr. J. William Scales, Pine Bluff, vice-president, and Dr. William Crutcher, Pine Bluff, secretary and treasurer.

Cass County (Ill.) Medical Society.—The annual meeting was held at Virginia, April 8, Dr. George Bley, Beardstown, was elected president; Dr Daniel Lyons, Ashland, vice-president; Dr. John A. McGee, Virginia, secretary, and Dr. John G. Franken, Chandlerville, treasurer.

Richland County (Ohio) Medical Society.—The annual meeting was held at Mansfield, April 4. Dr. M. T. Love, Shelby, was elected president; Dr S. Edwin Findley, Mansfield, vice-president; Dr. J. Lillian McBride, Mansfield, secretary, and Dr. Emma Millikin, Ontario, treasurer.

Orange County (Cal.) Medical Society.—At the meeting, held in Fullerton, April 7, Dr. William Freeman, Fullerton, was elected president; Dr. Foster E. Wilson, Westminster, vice-president; Dr. Howard S. Gordon, Westminster, secretary, and Dr. James R. Medlock, Santa Ana, treasurer.

Western Alumni Association of the University and Bellevue Hospital Medical College.—The third annual banquet will be held at the Sherman House, Chicago, April 30, at 6:30 p. m. Dr. George N. Kreider, Springfield, is president of the association, and Dr. Willis O. Nance, Chicago, secretary.

Golden Belt Medical Society.—At the annual meeting, in Abilene, Kan., Dr. John D. Riddell, Enterprise, was elected president; Dr. Edward W. Hawthorne, Gypsum, vice-president; Dr. Albert A. Shelley, Abilene, secretary, and Dr. Lamorte R. King, Junction City, treasurer. The next meeting will be held at Salina in July.

Jersey County (Ill.) Medical Society.—The forty-seventh annual meeting was held in Jerseyville, April 8, Dr. Augustus K. Van Horne, Jerseyville, retiring president, was the only survivor of the founders of the society. Dr Allen A. Barnett was elected president; Dr. John S. Williams, vice-president, and Dr. Henry R. Gledhill, secretary and treasurer, all of Jerseyville.

San Diego County (Cal.) Medical Society.—At the annual meeting, held in San Diego, April 3, the following officers were elected: President, Dr. Fred Baker, San Diego; vice-president, Dr. William V. Nichols, Oceanside; secretary and treasurer, Dr. Thomas L. Magee, San Diego, and delegate to the Medical Society of the State of California, Dr. Fred R. Burnham, San Diego.

Marion County (Ohio) Medical Society.—The first meeting of the merged Marion County Medical Society and Marion Academy of Medicine was held at Marion, April 7. Dr. Robert Ramroth was re-elected president; Dr. Charles E. Sawyer, elected vice-president, and Drs. Herman S. Rhu and Francis B. Sawyer were re-elected secretary and treasurer respectively, all of Marion.

buqu (Iowa) Medical Society.—The fifteenth anniversary
y will be celebrated by a special meeting, June
h papers are to be read by Drs. C. H. Mayo,
n, and **G. F. Lydston,** Chicago. In the afternoon
n he
participated in by Drs. Hugh
A. Wood and Norval H.
Lewis, Dubuque.

Society.—At the annual meet-
pril 2, and reported in The Journal
ffiliating the society with the Illinois
the American Medical Association
majority. Drs. Charles M. Noble,
H. Fenelon, all of Bloomington,
William R. Shinn, Chenoa, and
n, delegates to the state

the Prevention of Tuberculosis.—At
in Philadelphia, April 8, Dr. Howard
ess, urging the necessity for a popular
for the spread of practical knowledge
. A. Knopf, New York, also addressed
suggested, a committee being appointed
, was that of public lectures. A com-
o assist in the enforcement of the anti-
ntly passed by councils. Dr. Howard
d president.

almology and Oto-Laryngology.—The
and Oto-Laryngologic Association held
polis, April 9, 10 and 11. It was
ame of the organization to the Academy
Oto-Laryngology. The following officers
ward Jackson, Denver, president; Drs.
ouisville, John J. Kyle, Indianapolis, and
cinnati, vice-presidents; Dr Derrick T. Vail, Cincinnati, secretary, and Dr. Otto J. Stein, Chicago, treasurer. A resolution was adopted urging the state boards of health throughout the United States to secure the attention of street car and steam railway companies for an early consideration of the sanitary and therapeutic value of noiseless car wheels.

Iowa State Medical Society.—The fifty-second annual meeting was held at Sioux City, April 15 to 17. The new constitution and by-laws in conformity with the plan of reorganization were read by Dr. Van Buren Knott, Sioux City, in the absence of Dr. David S. Fairchild, Clinton, and after a little discussion, were adopted unanimously. The following officers were elected: President, Dr. Joseph A. Scroggs, Keokuk; vice-presidents, Drs. Donald Macrae, Jr., Council Bluffs, and Dallis M. Wicks, Cedar Falls; secretary, Dr. Vernon L. Treynor, Council Bluffs; assistant secretary, Dr. Francis A. Ely, Des Moines; treasurer, Dr William B. Small, Waterloo; trustees, Drs. Gilbert G. Cottam, Rock Rapids, and Daniel W. Finlayson, Des Moines; and member of the House of Delegates of the American Medical Association, Dr. Samuel Bailey, Mount Ayr, for two years. Des Moines was selected as the next place of meeting.

International Housing Congress.—This congress, which is to be held from July to November at the Grand Palace, in the Champs Elysees, is to have an American committee, of which Richard Watson Gilder of New York has just been made chairman. The other members of the committee are: M. E. Ingalls, Cincinnati; William B. Howland, Dr. E. R. L. Gould and James H. Hyde of New York; Carroll D. Wright of Washington; Albert Shaw of New York; Robert Garrett of Philadelphia. The object of the congress is to show the world the great need for improvement in both rural and city homes for workmen and clerks, and to this end there will be a collection from many countries of models of improved houses, of materials and methods of construction, and of furniture and decorations. There will also be models to show the sanitary, or, rather, unsanitary conditions in factories and many other places in which men work It is expected that the work of the congress will exert a potent influence in the control of consumption and alcoholism.

Tennessee State Medical Association.—The seventieth annual meeting, held in Nashville, April 14, 15 and 16, was the first meeting since the new constitution and by-laws came in force. The attendance was double that at any previous meeting. The prize for the best essay was awarded to Dr. Edward C. Ellett, Memphis. The following officers were elected: President, Dr. Isaac A. McSwain, Paris; vice-presidents, Drs. William H. Sale, Covington, Louis Leroy, Nashville, and Claude P. Fox, Greeneville; secretary, Dr. Deering J Roberts, Nashville (re-elected), and treasurer, Dr. William C. Bilbro, Murfreesboro. As the society at this meeting passed the thousand mark on its membership roll, it was entitled to three members of the House of Delegates of the American Medical Association. The following were elected: Dr. Louis Leroy, Nashville, to succeed Dr. W. Frank Glenn, resigned; Dr. James B. Murfree, Murfreesboro, to succeed Dr. George C. Savage, Nashville, resigned on account of ill-health; Dr. Daniel E. Nelson, Chattanooga, delegate for two years, and Dr. William B. Sanford, Memphis, alternate; Dr. Jeremiah L Crook, Jackson, delegate, with Dr. W. J. Miller, Johnson City, alternate. The next meeting will be held in Chattanooga.

AMERICAN MEDICAL ASSOCIATION.

Meeting of the Section on Hygiene and Sanitary Science, Saratoga Springs, N. Y., June 10, 1902.

The Chairman of the Section, Dr. Arthur R. Reynolds, Chicago, in the chair.

Symposium on Boards of Health and the Manufacture of Vaccine Lymph and Antitoxin.

The Chairman—Dr. Marcy suggests that we consider the manufacture of vaccine and antitoxin.

Dr. H. O. Marcy, Boston—The question is one which is exciting a great deal of attention in Massachusetts at present. The State Board of Health has for some time been making its own antitoxin, and now it is proposed to give it power to make vaccine lymph as well. The issue is: Shall we rely on large and reputable firms, like Parke, Davis & Co. and the New England Vaccine Company, as we have been doing hitherto, or will it be better to let the board of health organize another department and manufacture its own? Is it wise, in other words, to further extend the paternal influence of the state, or should we continue to rely on private manufacturers?

Dr. S. A. Knopf, New York City—I am not a health officer, but I have been present at meetings in New York where this subject has been discussed. I recall particularly a meeting under the auspices of the Society of Medical Jurisprudence, at which there were present representatives of the health departments of the city and state, and also representatives of commercial houses manufacturing vaccines. The discussion was very heated. Of course, the representatives of the manufacturers claimed that in a free country they had a right to manufacture vaccine lymph and antitoxin, and the health department of the city maintained that it had a right to do the same. During the discussion it was stated that some inferior antitoxin had been sold by the health department of New York City to the health department of Chicago. Possibly the chairman will be able to tell us something about that. I took part in the discussion at the close, and I may be allowed to repeat here the substance of what I said then. I took the position that we had no right to prevent the private manufacturers from continuing to make these preparations, but that, on the other hand, boards of health had also a right to make them. What, however, I considered of most importance was that every state should have a control laboratory, and that no vaccine or antitoxin should be allowed to be put on the market until it had been tested and passed by that institution. Only in this way, I believe, can we rely on getting the best possible products for our patients.

Dr. Benjamin Lee, Philadelphia—This is a question that has been forced on the attention of all of us in a very pointed manner during the last two or three years. The position which I have been inclined to take is, that the necessity the mercantile producer is under of keeping up his product to a proper standard if he wishes to sell it probably affords a greater safeguard than would be assured by placing the matter in the hands of men appointed by state governments, who, unfortunately, are too often appointed simply for political reasons. At the same time, we can not shut our eyes to the fact that there have been occurrences in this country during the past two years which go to show that some of the commercial virus has been absolutely inert, and some of it, on the other hand to a greater or less extent, dangerous. I believe the solution of the problem is to be found very much on the lines suggested by Dr. Knopf—that we should not prevent the production of commercial vaccine, but that each board of health should exercise a power of supervision and should see that no virus is foisted on the public which is either ineffective or likely to be dangerous. I was talking yesterday to a former member of the Pennsylvania Board of Health, who for nearly two years supervised the sanitary work in Porto Rico when the island was in charge of the United States Army, and he informed me that all the virus imported from this country—whether obtained from the New York Board of Health or from private manufacturers—was absolutely inert except in the case of one manufacturer, who produced what he called a triple-charged point. That was successful in some instances, but all the others were inert, and the way they met the problem was this: With some of this triple-charged virus they inoculated a number of calves, and driving these calves from town to town vaccinated the people direct from the animal. The result was that very soon and for some time thereafter there was not a case of smallpox to be found on the island, whereas when the army first went there the disease was rife. He tells me, however, that smallpox is now beginning to make its reappearance, and that it will be necessary to investigate the matter with the view of discovering the causes.

Dr. C. B. Johnson, Champaign, Ill.—Several years ago, in response to the solicitations of the Illinois State Medical Society, the University of Illinois established a vaccine laboratory on its grounds at Champaign. This has since been in operation and is under the care of able men, professors in the university. They make good, reliable vaccine, but other manufacturers come in the town and sell their products, and in other parts of the state the University of Illinois vaccine has by no means had the patronage it deserves. Just why this is true I am unable to say, unless it be that the commercial motive is necessarily lacking to properly place the Illinois product on the market.

Dr. Marcy—Do they sell it?

Dr. Johnson—At first they did not, but conceiving this to be unfair to other manufacturers the University of Illinois vaccine is now sold at the usual prices.

Dr. H. D Holton, Brattleboro, Vt.—Do they make points?

Dr. Johnson—Yes, they make points, and recently tubes also.

Dr. Seneca Egbert, Philadelphia—My views are very much the same as have been expressed by Dr. Lee. I feel that, as a rule, we are safer to trust to large firms, whose regular business it is to make these products, and whose interest it is to maintain the quality of their goods. At the same time, there is this to be taken into account. About six months ago the demand for vaccine lymph became so great that there was ground for believing certain firms shaved things a little and ran risks. One day I heard over the luncheon table of a certain firm having run out of vaccine lymph, and buying another firm's product, on which they put their own label. It may have been only gossip, but if true this clearly was not right. Even if one firm's was as good as another, it was a wrong thing to do, for the firm which bought the lymph knew nothing of their own knowledge as to its quality. While no one may be able to put his finger on the cause of tetanus following vaccination, it is at least possible that some firm was induced by the pressure of business to become careless. Such a thing might not occur again for a hundred years, but, as I have said, it is one of the things that have to be taken into account in considering this matter. A good, thorough examination of all these preparations would be an additional precaution against the possibility of such a thing, and, what is more, it would give the public a feeling of confidence that they do not have now. It is going to be hard in the near future to vaccinate the people in Philadelphia, even if we use all our powers of persuasion and do what we can to show them the advantages of it, for many have at present the fear of the graver danger of tetanus.

Dr. H. M. Bracken, Minneapolis—The question of control laboratories is an interesting one. The legislative committee discussed it at its February meeting in Washington, and the general opinion was in favor of central inspection. It was very much doubted if any system by which the work should be carried on by individual states would be satisfactory. It might be all right in some states, but not in others, and it is obvious that any such system of inspection should be uniform. For that reason it was agreed that it should be federal inspection if possible. I believe that as a rule the interest of the manufacturer in keeping up the quality of his goods will secure for us as good qualities of vaccine virus and antitoxin as we can get through the state laboratories. Their interests are involved to such an extent that they can not afford to run any risks, and they would probably be even more careful than the state laboratories. If all the states had Theobold Smiths at the head of their laboratories it might be perfectly safe to trust to them; but it is well known that not all have men of his standing, and that they can not get them. In fact, in some places it is hardly possible to get good men to take up this kind of work.

Sometimes the state may advantageously produce certain of these products, but I do not think they should ever do so with a view to commercial gain. State products should always be for free distribution. There is no reason whatever for any of our state boards of health to go into commercial enterprises.

Dr. Lee has referred to the fact that vaccine virus imported into Porto Rico from the United States was found to be inert. That, I would like to point out, may have been due to climatic influences. It is well known that vaccine virus loses its efficacy when exposed to a high temperature, and that glycerinated vaccine is easily rendered inert in this way. It is natural that they should get better results in Porto Rico when they inoculated direct from the calf. I hope

Picric acid is an old-time remedy which is said to serve as an analgesic, an antiseptic, and has keratogenetic powers. It may be combined as follows:

℞.	Acidi picrici	ʒss	2	
	Spts. vini	ʒx	40	
	Aq. destil q. s. ad	℥xiv	420	

M Sig.: Apply locally.

The lesion should be thoroughly cleansed with this solution, used on absorbent cotton. The blebs should then be opened, allowing the skin to remain. Strips of gauze soaked in the solution should be applied and allowed to remain for four or five days, when a new dressing should be applied.

In burns of the second and third degree more satisfactory results, according to the author, are obtained by dry dressings with antiseptic powders such as airol, xeroform, and nosophen, as these preparations are harmless and are to be applied in full strength. Salves may be substituted, made up as follows:

℞.	Airol	ʒi	4	
	Lanolini anhyd.			
	Liq petrolati, āā	ʒiv	15	

M. Ft. unguentum. Sig.: Apply locally and cover with gauze and absorbent cotton, and allow the dressing to remain intact for several days; or:

℞	Ichthyol	gr. xlv	3	
	Olei olivæ (sterile)	ʒiiss	10	
	Lanolini			
	Liq. petrolati, āā	ʒx	40	

M. Ft. unguentum. Sig.: Apply locally; or:

℞.	Sol. plumbi subacet.	ʒiss	6	
	Olei lini (sterilized)	ʒiiss	10	
	Xeroformi q. s. ad	℥i	30	

M. Ft. unguentum. Sig.: Apply freely on gauze.

Rachitis.

Comby, in "Med. Press," states that he has obtained the best results from the following in the treatment of rickets:

℞.	Olei morrhuæ	℥iv	120	
	Sol. calcii lacto-phos. (50 per cent.)	℥i	30	
	Syr. lacto-phos.	℥iii	90	
	Tinct. cinnamomi	m. lxxv	5	

M. Sig.: Two to five teaspoonfuls daily; or:

℞.	Essentiæ limonis	gtt. ii		12
	Phosphori	gr. 1/6		01
	Sacchari	℥i	30	
	Olei amygd. dulcis	℥iiss	75	

M. Sig.: One teaspoonful daily

Treatment of Wounds.

Sleich, according to the "N. Y. Med. Jour.," recommends the following topical applications that are nutrient to the tissues and non-irritating:

PEPTONIZED PASTE.

℞.	Peptone (dry)			
	Amyli			
	Pulv. zinci oxidi, āā	℥ss	15	
	Pulv. acaciæ	℥i	30	
	Lysol	gtt. v		30
	Aq. destil. q. s.			

M. Ft unguentum. Sig.: Apply locally.

SERUM PASTE.

℞.	Seri bovis	℥ii	60	
	Zinci oxidi	℥i	30	

M. et fiat pulvis.

After the foregoing is dried and reduced to a powder the following mixture is then prepared:

℞.	Pulv. seri et zinci oxidi	℥i	30	
	Aquæ	℥ss	15	
	Peptonic paste	ʒii	8	

M. Sig.: Apply locally.

The author especially recommends the foregoing as an application to varicose ulcers.

In the treatment of syphilis the following is recommended by the author as a local application:

℞.	Ung hydrarg.	℥i	30	
	Peptonic paste	℥ii	60	
	Olei theobrom.	ʒiii	12	
	Aq. destil.	ʒiii	12	

M. Sig.: Apply locally.

Baldness.

The following combinations are recommended by "Merck's Report" in the treatment of baldness:

℞.	Plumbi acetatis	ʒiss	6	
	Sulphuris precip.	ʒii	8	
	Tinct. cantharidis	ʒi	4	
	Glycerini	℥ii	60	
	Alcoholis	℥i	30	
	Olei citronellæ	m. xv	1	
	Olei bergamot	m. viii		50
	Aquæ q. s. ad	Oi	480	

M. Sig.: Apply locally to the scalp; or:

℞.	Sulphuris precip.	ʒii	8	
	Plumbi nit.	ʒiss	6	
	Tinct. cantharidis	ʒii	8	
	Glycerini	℥ii	60	
	Alcoholis	℥i	30	
	Olei lavendulæ	m. xxx	2	
	Olei amygd. (essential)	m. iv		25
	Aquæ q. s. ad	Oi	480	

M. Sig.: Apply locally.

Phosphorus in Alopecia.

According to an abstract in "Month. Cyc. of Med.," phosphorus in small doses is of great service in the treatment of alopecia areata. The following formula is recommended:

℞.	Phosphori	gr. i		06
	Olei olivæ, q. s. ad. solutio			

Then add:

	Acidi arsenosi	gr. ii		12
	Excip. q. s.			

M. Ft. pil. No. cxx. Sig.: One pill to be taken daily for two months, followed by an intermission of one week until three hundred pills are taken, when a cure is generally effected.

Substitutes for Potassium Iodid.

On account of the after-effects produced by the administration of potassium iodid, Solis-Cohen reviews, in "Amer. Med.," other preparations which may be substituted for this preparation. Among these substitutes he mentions iodized starch containing 5 parts of iodin and 95 parts of starch given usually in doses ranging from grains 3 to 10 (.2-.6). However, it has been given in gradually-increased doses reaching ½ ounce (15.). Locally this preparation is of service in the treatment of sluggish ulcers from any cause.

Iodoform may also be given as a substitute for potassium iodid in doses ranging from 30 to 80 grains (2.-5.).

Locally it may be applied as follows:

℞.	Iodoformi	ʒiv	15	
	Balsami peruvianæ	ʒii	8	
	Lanolini	℥ii	60	

M. Sig.: To be applied locally.

Iodol is not infrequently given in doses ranging from 6 to 30 grains a day (.4-2.). In the treatment of angina pectoris the author quotes the following formula employed by Maldorescu:

℞.	Iodol	gr. xxx	2	
	Ext. glycyrrhizæ, q. s.			

M. Ft. pilulæ No. xx. Sig.: Two pills twice a day.

Iodolene, a compound of iodol and albumin, contains about 10 per cent. of the former preparation. It is said to possess the antisyphilitic properties of the iodids and is more lasting in its effect, as it is more slowly eliminated. It may be given in doses ranging from 20 to 30 grains (1 20-2.00) repeated four or five times a day.

Iodipin, which is a combination of iodin in oil of sesame, is one of the best substitutes for the iodids, as it contains about 10 per cent. of iodin. It is said by the author not to be broken up in the stomach, but the iodin is liberated by the intestinal juices or, according to some authors, absorbed unchanged, and liberation takes place in the tissues. Consequently, its effects, as in the case of iodolene, are very much prolonged. This preparation produces no gastric disturbance and gives no symptoms of iodism. It is absorbed very rapidly by the system, as it has been detected in the urine within fifteen minutes after its administration by the mouth, but it has rarely been detected in the feces, which fact shows that it is practically all taken up by the system.

It is recommended in all the diseases in which potassium iodid is indicated, as in syphilis, asthma, neuralgia, arterio-sclerosis, etc. It is best to prescribe it in the form of an emulsion, as follows:

℞.	Iodipin	℥ii	60	
	Pulv. acaciæ	℥i	30	
	Aq. menth. pip.	℥iii	90	
	Syrupi simp.	℥i	30	

M. Ft. emulsio. Sig : One to two teaspoonfuls at a dose.

"Merck's Archives" recommends its administration in the following form:

℞.	Iodipin (10 per cent.)	℥iii	90	
	Yolks of two eggs			
	Pulv. cacao	ʒi	4	
	Sacchari	ʒii	8	
	Olei cinnamomi	m. ii		12

M. Sig.: One to two teaspoonfuls two or three times a day.

It is frequently given in the form of a hypodermic injection in doses ranging from 20 to 40 minims. The preparation must be placed in warm water previous to injecting, as the oil is too thick for hypodermic use when cold. It serves as a good test of the motor power of the stomach, as it is not absorbed by the stomach.

Medicolegal.

Medical Attendance on Husband a Family Necessity.—The Supreme Court of Nebraska holds, on rehearing, in the case of Leake vs. Lucas, that the husband, while living with his wife, is part of the family, and medical attendance of which he stands in need is a family necessity, within the meaning of section 1 of chapter 53 of the Compiled Statutes of Nebraska, which makes the unexempt property of a married woman liable for the payment of all debts contracted for necessaries furnished her family after execution against the husband for such indebtedness has been returned unsatisfied for want of property. And it holds that where medical attendance is furnished the husband under the circumstances above stated, and while the family are residing in Nebraska, and the family afterward remove to a sister state, a judgment against the husband in the state to which he has removed, and the return of an execution unsatisfied, is a sufficient compliance with the Nebraska statute to entitle the creditor to proceed against the wife (in Nebraska) for the collection of his demand.

Privilege Can Not Be Waived by Widow.—Section 834 of the New York Code of Civil Procedure provides that, "a person duly authorized to practice medicine or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, which was necessary to enable him to act in that capacity." Section 836 provides that, "a physician or surgeon may, on the trial or examination, disclose any information as to the mental or physical condition of patients who are deceased which he acquires in attending such patient professionally, . . . when the provisions of section 834 have been expressly waived on such trial or examination by the personal representatives of the deceased." The words "personal representatives," as used in section 836, the First Appellate Division of the Supreme Court of New York holds, in the case of Beil vs. Supreme Lodge, Knights of Honor, apply only to executors and administrators. Consequently, where a widow was seeking to recover on a mutual benefit certificate made payable to her, but which she could not do under the terms thereof without proving that at the time her husband committed suicide he was in a state of delirium, resulting from illness, she was not entitled to call as a witness therefor the physician who attended him at or immediately prior to the time of his death, she not having the power to waive the prohibitions of section 834, not being the personal representative of the deceased within the meaning of section 836.

Utilizing Refuse from Consumptive Sanitarium.—The Third Appellate Division of the Supreme Court of New York says that the gist of the crime of which there was a conviction in the case of People vs Van Fradenburgh, was the disobedience of a lawful order of a board of health. Unless, then, the order disobeyed was one lawfully made by the board of health, the accused had been guilty of no crime. The order was one forbidding him from drawing into the corporate limits of the village any more refuse from the table and kitchen of a sanitarium for consumptives, which he had been collecting for feed for his chickens and hogs. There was no proof that this refuse from the sanitarium for consumptives was any more dangerous to the community when exposed than the refuse from any hotel, and the court says that it can not assume such to be the fact in sustaining this conviction. Has the board of health, then, the right to forbid a person from bringing into the village refuse from a hotel or any other public house? the court asks. Under the evidence in this case, it says, such refuse, while it is fresh, is wholesome food for hogs and fowls. The menace to the public health lies in permitting it to remain until it decays and throws off a stench which is prejudicial to the comfort of the community, if not to its health. As long, therefore, as the mere bringing into the community of fresh refuse from a public place has in it no element of threatened danger to the public health or comfort, the court is unable to see by what authority the board of health is permitted to prohibit the same. For this reason, it is added, the people have failed to prove the commission of a crime, and the judgment of conviction must be reversed.

County of Legal Residence Must Pay for Quarantine.—Section 7059 of the General Statutes of Minnesota of 1894, which provides for quarantine in case of smallpox, or other contagious disease dangerous to the public health, makes the expense a charge on the county in which the person has a "legal settlement," if he, his parents, guardian or master be not able to pay therefor. In the case of the Town of Louriston vs. Board of Commissioners of Swift County, a man and his family had resided in a county continuously for more than one year, and then moved to an adjoining county and became residents thereof. Then, inside of a month or so, some of the members of the family were taken sick with smallpox, and the board of health of the town caused the family to be quarantined and cared for. They never had been paupers or a public charge, but were unable to pay the expenses connected with their confinement and treatment. The town sued the county in which they had formerly resided for the expenses connected with their quarantine, care and treatment. But the Supreme Court of Minnesota holds that county was not liable, under section 7059 above referred to, for the reason that the family had acquired a legal residence in the other county at the time the expense was incurred. It says that the quarantine of those attacked with the disease, their care and maintenance, is an incident to the control of the contagion, and it naturally follows that if such persons are at the time residents of the county, such county is to bear the necessary expense of their care, provided the people themselves, or their relatives and representatives, are unable to do so. These acts are independent of and have no relation to the poor laws, except when the persons stricken with the disease were paupers or dependents while still residents of the former county The words "legal settlement" are synonymous with "legal residence."

What Constitutes "Sound Health."—In the case of Packard vs. Metropolitan Insurance Company the policy sued on contained a provision "that no obligation is assumed by the company prior to the date hereof, nor unless on said date the insured is alive and in sound health." The Supreme Court of New Hampshire says that it must be presumed that the parties intended by this provision what the words used by them ordinarily signify in common speech. What was meant by the words "sound health" was, evidently, not perfect health. "We are all born with the seeds of mortality in us." No definition can be given to these words that will apply in all cases. A mere temporary indisposition or ailment would not ordinarily be regarded as rendering the health unsound, within the meaning of these words when used in an insurance contract. Spe ing generally, they mean the absence of any vice in the constitution, and of any disease of the serious nature, that have a direct tendency to shorten life; the absence of a condition of health that is commonly regarded as disease, in contradistinction to a temporary ailment or indisposition. Whether, in a given case, a person is of sound health, must, of course, depend on the circumstances of the case. The insured in this case was a boy of 10 years of age. After he was examined by the company's physician, and before the date of the policy, he "fell sick of a disease of the heart," from which he died within six months. Although the disease was one which it was said was not infrequent among children, and is frequently outgrown, it could not reasonably, the court says, be regarded as a temporary ailment, or as not of a serious nature. A person having such a disease would not be regarded as in sound health. The fact that the boy's mother, who was suing, was not aware of the nature of the disease, and that its nature was undiscoverable except by a physician, did not prevent it from rendering the boy's health unsound. Undoubtedly, the testimony of the mother and others that the boy appeared to be in good health would be competent evidence on the issue of soundness, but it would not be conclusive. The testimony of physicians concerning the condition of his health, discovered by their examinations of him, would also be competent. If the boy was sick with consumption at the date of the policy, no one would say that he was in sound health

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

April 11.

1 *Some Problems in the Major Surgery of the Kidneys, with a Report of Cases. Joseph A. Blake.
2 *An Operation for Paronychia. Sinclair Tousey.
3 *The Geographic Distribution of Uncinariasis in the United States. William R. Stone.
4 *Report of a Case of One-Sided Dislocation of the Mandible. Reduced by a Novel Manipulation. Frank Woodbury.
5 Eye Affections Complicating and Resulting from Rheumatism. Ralph Opdyke.

1. **Kidney Surgery.**—Blake's paper is largely a report of cases, but he points out the advantages of nephrectomy over nephrotomy in pyonephrosis and hydronephrosis, allowing that the other kidney is in a good condition, and illustrates his points by cases. The dangers of so-called conservative surgery, namely, nephrolithotomy and pyelolithotomy in infected kidneys, are, he thinks, markedly emphasized by statistics, especially those of Israel.

2. **Paronychia.**—The operation described by Tousey consists in separating the attachment of the cuticle to the dorsal or exposed surface of the nail to a sufficient extent to permit the escape of the pus and the introduction of a stick of nitrate of silver to disinfect the sulcus. Its advantages over removal of the nail are simplicity and painlessness.

3. **Uncinariasis.**—Stone finds that only about 38 cases have actually been reported in this country, and at least 18 of them were contracted outside the United States. This discovery by Stiles of *Uncinaria americana* is, however, of importance, and it appears from the testimony of Dr. A. J. Smith of the University of Texas that about 8 per cent of the students there examined were infected with the parasite.

4. **Jaw Dislocation.**—Woodbury reports a case of onesided dislocation in which he replaced the mandible with the following manipulation: Seizing the ramus and angle of the bone with the left hand, he placed his thumb in front of the coronoid process. While pressing the bone downward and backward he asked the patient to gently open and close the mouth several times and then, at a time when the mouth was nearly closed, acting under impulse, he struck the left side of the chin a sudden gentle blow with the knuckles of his right half-closed hand. The return of the condyle to its place was announced by an audible click, to the great satisfaction of the patient. He thinks the gentle motions of opening and closing the mouth worked the condyle gradually back, and the sudden application of force took the muscles by surprise while they were, so to speak, off their guard, and the condyle with its articular cartilage slipped over the obstruction into the glenoid fossa, before the muscles had time to contract. He thinks the method will be useful in cases where the dislocation is confined to one side.

Medical Record, New York.

April 11.

6 *The Technic of Nephropexy, with Special Reference to a Method of Attaching the Kidney as Nearly as Possible in Its Normal Position. Ramon Guiteras.
7 *Intranasal Obstruction and Its Treatment. H. Hoyle Butts.
8 *Cases of Morphinism in Which the Drug Was Immediately Withdrawn. Margaret S. Halleck.
9 *Bronchopneumonia. Joseph N. Study.
10 *The X-Ray and the Finsen Light in the Treatment of Lupus. A. D. Rockwell.
11 *The Treatment of Ringworm. George T. Jackson.

6. **Nephropexy.**—Guiteras outlines the various methods employed and gives his own technic. He denudes but one-half of the posterior surface of the kidney, that nearest the convexity, leaving the anterior surface intact. He then passes his sutures through and under the reflected capsule in such a way that they hold the organ securely during the formation of adhesions that goes on after the operation, and ties his sutures over the muscles and fasciæ in such a way as to bring the kidney into close apposition with the parietes, as nearly as possible at the normal level and in its normal horizontal angle, with the convex border pointing outward and slightly backward. The paper ends with an extensive bibliography on the subject.

7. **Nasal Obstruction.**—The various causes of nasal obstruction and the means of their relief are described by Butts. He believes in cases of hypertrophic rhinitis that there is nothing equal to the judicious application of the electrocautery for obstruction or hypertrophic tissue. In case of septal spurs he would remove them when they impair the respiratory function and whenever they impede drainage from accessory sinuses or nasal fossæ, or when they are in contact with opposing structures. For deformities of the cartilaginous septum he believes in the Asch operation. Septal abscess and nasal myxomata are also described, and he gives the technic for various operations.

8. **Morphinism.**—Five cases are reported of the rapid cure of the morphin habit by the use of hyoscin and strychnin injections, the former in doses of 1/200 of a grain, the latter 1/60 of a grain, with codein sulphate ¼ of a grain. Several cases are reported, some of opium smokers and others who had taken it by the mouth or hypodermically for seven to ten years. Halleck believes this method is better than the gradual reduction. Strychnin stimulates while the morphin is being eliminated, while the nausea, restlessness, insomnia and pain are cared for by the hyosin and codein. In the cases reported there seems to have been very little suffering from the rapid treatment, which lasted from one to five or six days.

9. **Bronchopneumonia.**—Study believes in the contagiousness of this condition, and would treat it by placing the child in the best conditions of light, ventilation and temperature, using turpentine and lard or camphorated oil; calomel to move the bowels, opium to quiet, in the smallest possible dose, and hydroptherapy as a rule for the high temperature, keeping up, of course, good nutrition by proper diet and nursing if the child is of the proper age.

10. **Lupus.**—Rockwell briefly reports a case in which a certain amount of benefit was derived from the Finsen light treatment, and the condition remained stationary, but was later cured by the use of *x*-rays. He questions whether this experience might not have been reversed in some cases from idiosyncrasy, etc. The question of the difference between actinic and *x*-rays is an interesting and important one in which the personal equation must often be the determining factor.

11. **Ring-Worm.**—The reason of the intractability of ring-worm of the scalp and beard is that the fungus grows down into the hair follicles, which can not be reached by the ordinary remedies. In looking for a suitable excipient, goose grease appeared to Jackson as about what he wanted. He found that a dram or more of the crystals of iodin added to an ounce of

goose grease will make a most effective remedy for ringworm. He applies it twice a day until it produces a reaction, and then once a day. In two or three weeks the hair falls out of the patch, which becomes bald for a time. After a time the hair grows in and the patch is well. If there is too much reaction, with swelling, the remedy may be suspended for a few days and salicylated oil of a 3 per cent. strength used. As soon as the reaction subsides the remedy should be used again. This method has been practiced in the Vanderbilt Clinic with good results.

American Medicine, Philadelphia.

April 11.

12 [illegible] Clavicles, with Photograms and Dysostosis. Harry M. Sherman.
13 *[illegible]cyte. John C. DaCosta, Jr.
14 *An Operation for Cicatricial Contractures of the Upper Extremities. A. H. Traver.
15 *Glycerol of Iodin—*An Old-New Remedy for Tuberculosis,* Chronic Bronchitis, Chronic Pleurisy, Goiter, etc. T. W. Williams.
16 Cancer of Male Breast: Report of a Case. Edward A. Balloch.
17 Congenital Absence of Both Inferior Recti Muscles. Edward Stieren.
18 Glimpses of the Practice of Medicine and Diseases in the West Indies. (Concluded.) Nicholas Senn.
19 How Can the Standard of the Medical Profession Best Be Raised? George V. N. Dearborn.

13. Degeneration of the Erythrocyte.—After an elaborate description of the changes which occur in the red cells in various conditions of disease, Da Costa summarizes as follows:

1. The viscosity of the erythrocytes is influenced by cellular and plasma alterations, the nature of which is obscure. The viscosity is exaggerated by the direct influence of various toxic agencies, and is diminished in many anemic states. This phase of cellular pathology is interesting from an experimental point of view, rather than as a finding of clinical application.

2. Simple decoloration illustrates the earliest retrograde change affecting the erythrocytes, and its intensity generally corresponds to the severity of the anemic process by which it is excited. The change may exist alone, as in the milder forms of anemia, or it may be combined with graver necrotic degeneration of the cells, in anemias of greater severity.

3. Deformities of shape and size are common to all pathologic blood, the degree to which such changes develop being related to the intensity of the blood impoverishment. Megalocytosis is a more serious sign than microcytosis.

4. Atypical staining of the erythrocytes betrays an impairment of function, and, as a rule, is found most commonly in corpuscles whose hemoglobin content is subnormal. It is most striking in anemias of the primary type.

5. The prevalence of megaloblasts indicates a fetal reversion of the bone marrow, and stamps the blood changes as pernicious, except in the anemias symptomatic of *Bothrioccphalus latus* infection and of nitrobenzol poisoning. The presence of megaloblasts indicate a severe anemia, but not necessarily one of fatal outcome.

6. Granular basophilia, whatever may be its exact origin, should be interpreted as a sign of degeneration. It is a constant blood finding in but a single condition—lead poisoning—but is associated with many diseases involving a variable degree of blood deterioration. The experimental basophilia excited by the administration of preparations of hemoglobin warrants a doubt as to the wisdom of using such medicaments as substitutes for iron in the treatment of anemia.

14. Cicatricial Contractures.—Traver reports a case where extensive cicatricial contractures of the upper extremity were cured by denudation of a portion of the cicatrix and substitution of a flap taken from the side of the chest. Successive operations by this method made a useless arm a practically normal functionating member. A full understanding of the article requires seeing the diagrams which accompany it.

15 Glycerol of Iodin.—Williams calls attention to the value of glycerin as an excipient for iodin, instead of alcohol, for local application. It has the advantage of leaving no stain on the skin and producing only slight local irritation while absorption is more complete. It can not be used as freely as the tincture because it produces symptoms of iodism more quickly.

Philadelphia Medical Journal.

April 11.

20 The Recent Epidemic of Typhoid Fever in Ithaca, New York. Mervin T. Sudler.
21 *Some Remarks on the Treatment of Croupous Pneumonia. C. S. Bradfute.
22 *The Diagnosis and Treatment of Incipient Pulmonary Tuberculosis. H. Edwin Lewis.
23 *A Plea for the Use of Less Drugs in the Treatment of Typhoid Fever. J. K. P. Bowen.
24 *The Postorbital Limbus: A Formation Occasionally Met with at the Base of the Human Brain. Edward A. Spitzka.

21. Croupous Pneumonia.—Pneumonia is a self-limited disease tending to recovery, but varying under different circumstances in its severity and the effects of treatment. It is rare, Bradfute claims, in the normal individual. In nearly every case he thinks there is some radical defect, infection or some accompanying pathologic condition which serves to promote the growth of the germ. The pneumococcus alone is not always responsible. The influenza bacillus has been observed, and secondary infection may occur with the staphylococcus or streptococcus. It is not a systemic disease, but a localized infection with secondary systemic disorders due to exaggerated reflex influence and toxemia, and while, as a morbid condition, it is simple and free from obscurity, the indications for therapeutic measures are complex. We should not merely treat the symptoms, but treat the general pathologic state. In the regular typical cases without complications there should be no drug employed that would weaken the vital resistance. The coal tar preparations are especially unscientific, and he particularly protests against the use of digitalis. In cases in which it is necessary to control the abnormal circulatory movement as quickly as possible, he would give aconite, which, however, should be used with great caution—dosage of one to two drops—and not given to the extent of reducing the cardiac beats to the normal rate. Its action should be eliminated at the proper time by strychnin, 1/20 of a grain dose if necessary. At the beginning of treatment the bowels should be opened by calomel, mild glycerin suppositories or a seidlitz powder. The principal drugs that are indicated in treatment are strychnin, codein, ammonium and alcohol, the first two as nerve stimulants; ammonium as a cardiac stimulant. Hydrotherapy is also advised for combating the temperature, and he would use it in the method of cold compresses after the Baruch plan, which he describes A rubber sheet to protect the bedding is spread beneath the patient and over this a blanket. A piece of heavy flannel folded to several thicknesses, long enough to encircle the trunk, with about six inches to lap over, is wrung out of cold water, applied snugly to the circumference of the thorax and fastened with safety pins. This is then covered with a piece of dry flannel or part of a blanket and allowed to remain from fifteen to thirty minutes, according to the frequency of applications. When the compress is removed the front and sides of the chest should be rubbed briskly with a soft towel for a few seconds and the thorax enveloped in dry flannel. If the temperature is very high and intractable, above 104 F., these compresses should be wrung out in ice water and applied every half hour until there is a fall. They should not be applied, however, when the rectal temperature is 103 F. or less, for any chilling of the body is to be avoided. He insists on the constant and frequent administration of nourishment by liquid food, six ounces of milk every two hours as a standard rule. The alimentary tract should be kept free from decomposing food. He advises 5 grains of naphthalin twice daily from time to time, keeping the bowels open with calomel and sodium phosphate. Alcohol should also be used as a food. Half an ounce of whisky every two hours is usually sufficient, but when an odor appears in the breath the drug should be stopped and in every case diminished in dosage at the earliest possible moment to avoid establishing the alcohol habit.

22. Incipient Tuberculosis.—Lewis points out the principal symptoms indicating a tuberculous process, no one alone being sufficient. He lays stress on the importance of temperature, pulse, usually increased in frequency, but decreased in force, cough which is constant early in the disease, loss of weight, dilatation of the pupil and a tendency to hoarseness without apparent cause. The physical signs and hemoptysis are not sufficiently reliable in the early stages. Sputum examinations frequently repeated are important, though he has seen patients who have never shown bacilli even to death, though postmortem and inoculation experiments proved the diagnosis He considers that there is some danger in the tuberculin test in spite of the experience reported by others. From his own observations and experience he thinks there are safer methods. Treatment is dwelt on in some detail. The importance of open air, watching the temperature range and regulating exercise accordingly, proper attention to nutrition without crowding the digestive organs, the use of strychnin in rather larger doses than ordinarily administered or in increasing doses up to 1/10 of a grain three times a day, then going back again to the initial dose. Arsenic is the next most important remedy, and he finds dimethyl arsenate of soda the most efficient in doses of ¼ to 1 grain three times a day. To relieve the cough he would give guaiacol with heroin. He has lost faith in creosote. Atropin, agaricin and picrotoxin are each efficient in relieving night sweats, but an alcohol bath and a rub down at bedtime is often excellent. Internally, alcoholic stimulants are not advised. For inhalation he would use soothing antiseptic vapors. Numerous remedies are recommended, he says, but an especially eligible combination is one of iodin, tincture of benzoin, oil of cinnamon, oil of eucalyptus and albolene. In conclusion he remarks that the cure of incipient pulmonary tuberculosis is not the elusive phantom that it was ten years ago.

23. **Typhoid Fever.**—From a general discussion of the subject, Bowen lays down the following treatment of typhoid, physiologic and medicinal:

1. Rest; maintain the horizontal position to save the heart strength and do not endanger the intestines if complicated by congestion, hemorrhage or perforation; regular change of position in weak patients. Cleanliness, plenty of pure air and light, cheerful, inviting and quiet surroundings, as far as possible. No food usually to be given during the period of anorexia or first week or ten days of fever; then given more freely, as the case may demand, usually from one to three pints of buttermilk daily, plenty of pure water; warm sponge bath with massage of skin and muscles, hot water to abdomen for pain, cold pack for hyperpyrexia and delirium in some cases. Mental rest, be specific and symptomatic, avoid negative directions to nervous patients. Psychotherapy, also, is an important factor in vasomotor disturbances, which effects normal metabolism and repair of lesions, as well as in the so called functional disturbances. Avoid showing any signs of overanxiety by word or act, if possible. Inspire confidence, if you can; if not, retire at once. Serumtherapy should be employed if ever discovered and proved.

2. No drugs as a routine, except external antiseptics and for mouth and nose and some complications. Calomel may be given in the beginning, if indicated by a pale, coated tongue and constipation. Atropin if evidence of much congestion of intestines and pale skin, but not to be continued long; atropin is also valuable in some cases of meteorism, as it may correct the atony of the muscular tissues of the intestines. Castor oil is the best laxative and usually the best remedy for meteorism, necrosis and ulceration, and to be used throughout the case. Turpentine internally for meteorism and externally with hot water to abdomen for pain, also in enemata. Avoid using too freely salines for distension of bowels with liquids or for congestion or in plethoric conditions. Diluted hydrochloric acid if tongue is pale and flabby. Morphin and atropin for sleeplessness in some cases; also for severe pain or hemorrhage or active delirium, but should be used cautiously. Strychnin may be indicated, especially during convalescence. Acetozone may be tried as a general antiseptic. Greater skill is required to carry out successfully a general physiological treatment than in the mere drug giving, and the successful application of these principles will depend much on the judgment and tact of the physician. Success in the healing art rests on the knowledge of the principles, and clinical experience.

24. **Postorbital Limbus.**—Spitzka describes a curved, welt-shaped eminence, lying in apposition with the temporal apex on the orbital surface, which is demarked from the rest of the orbital region by a more or less distinct incisure. He has found this in a native of Japan, in two brains of female Papuans and in the brain of a distinguished American scientist He has found it described nowhere else as far as he has been able to observe, excepting in a Laplander by Retzius, who speaks of it as a post-orbital gyrus.

New York Medical Journal.

April 11.

25 *Intestinal Obstruction. John B. Harvie.
26 *On the Physiological Action of Silver Sulphoichthyolate. Horatio C. Wood, Jr.
27 *Practical Points on Intubation of the Larynx for Croup, with a Report of 36 Cases. (Concluded.) Fielding L. Taylor.
28 Food and Nutrition in Disease. L. H. Watson.
29 *Methods Which Render Some Therapeutic Agents More Palatable. Samuel E. Earp.
30 The Management of Occipitoposterior Positions of the Presenting Head. (Continued.) Walter J. Cavanagh, Charles Norton Barney and George B. Twitchell.

25. **Intestinal Obstruction.**—Hernias are the most common causes of intestinal obstruction and should always be looked for. They are usually overlooked especially in cases of internal hernias. They may often occur without distension or particular discomfort, making the case exceedingly obscure. Harvie notes these points and reports a case of obstruction and autorelief by the passage of a very large gallstone. The most common form of chronic obstruction will be found to depend on some malignant growth. This is the principal subject of his article. As soon as the diagnosis is made, radical operation would seem advisable, even before the diagnosis is complete. Two cases are reported, both showing a gradual onset with well-marked clinical symptoms. The idea of surgical interference seems to have been ignored for a considerable time in both cases The operative histories showed the practicability and almost positive favorable outcome if early operation had been done.

26. **Silver Sulphoichthyolate.**—This substance, known also as ichthargan, has been studied by Wood, who finds that it is readily broken up by hydrochloric acid, and is, therefore, unabsorbable as the sulphoichthyolate in the stomach. Its toxic power seems to be very much less than that of silver nitrate, and it is less irritating. The harmlessness of large doses depends on the slowness of absorption. A number of experiments is reported and show that the action of the compound is similar, at least qualitatively, to that of other silver salts. It has the advantage over silver nitrate in that it is locally less irritant and decidedly less poisonous.

27. **Intubation.**—The concluding portion of Taylor's article is entirely given up to reports of cases.

29. **Unpalatable Drugs.**—Earp gives several points in regard to making unpalatable drugs less disagreeable to the patient and insists on the importance of this point. To give castor oil in one dose, perhaps the "castor oil sandwich" is the best method. In the bottom of a glass put a small quantity of glycerin, then the oil, and lastly a little sherry wine on top. Take at one draught. This will also apply to the single dose of cod liver oil. Soda water will also be effective. It will also do for Epsom salts, but the ordinary "soda pop" is better. Quinin is hard to disguise. The preferable method, according to Earp, is to give one grain of tannic acid to each three grains of quinin in a vehicle of syrup of tolu. The iodid and bromid of potassium and salicylic acid may be given in milk, which also prevents gastric irritation. If copaiba and turpentine are not used in gelatin capsule form, an emulsion flavored with gaultheria comes next in order. For chloral hydrate he thinks peppermint water better than cinnamon. Equal parts of peppermint water and simple syrup make a good solution for salicylate of sodium. Unless there is an objection to the intensely sweet taste, the syrup of glycyrrhiza answers best for sodium salicylate. After flushing the mouth with a little whiskey the medicinal oils may be taken immediately, and the disagreeable taste is not so perceptible. A few grains of table salt taken on the tongue will produce a copious flow of saliva, and then, if swallowed with medicine which has an objectionable taste, it may be somewhat disguised. Care should be taken as regards chemical incompatibility in these cases. If lemon ice is held in the mouth for only a moment, a teaspoonful of a preparation which would otherwise seem nauseous may be taken with very little unpleasant effect. When the secretions are inactive and the membranes parched and dry, bitter principles are apt to produce the very worst effect and leave an unpleasant aftertaste. Sometimes simply a drink of water will obviate this condition, or perhaps a lump of ice held in the mouth or water acidulated with dilute phosphoric acid, to be taken before the medicine. A combination of syrup of red raspberry and glycerin makes an unusually palatable vehicle. He also recommends sodium bicarbonate with salicylic acid and sodium salicylate.

Boston Medical and Surgical Journal.

April 9.

31 *Dry Hot Air as a Therapeutic Agent, with Demonstration of the Body Treatment. Clarence Edward Skinner.
32 *The Rôle of Atmospheric Pressure in the Hip-Joint. Seabury W. Allen.
33 *The Doctor in the Navy. A. J. Nute.
34 A New Modification of Tarnier's Axis Traction-Rods. L. V. Friedman.
35 Death from a Single Vaginal Douche; Report of Two Cases. G. De N. Hough.
36 The Relative Frequency of Multiple Sclerosis. E. W. Taylor and J. W. Myer.

31. **Dry Hot-Air.**—Skinner reviews the uses of dry hot air in various disorders, first of all rheumatism, in which he finds it useful to give some salicylic compound as an adjunct. The hot-air applications cause relief of pain, shorten the duration of the disease, lessen the liability to cardiac involvement owing

to the rapid control obtained over the pathologic condition, prevent the danger of reinfection, lessen the amount of drug medication the patient is obliged to take, and in many cases intractable to other measures it is curative. When judiciously applied it is never productive of vicious after-effects. Sprains are also readily amenable to this agency. In many cases of arthritis deformans it is a valuable adjunct to treatment, if not a curative measure by itself. From six months to a year or more is usually required to produce a cure, but he has seen cases cured in a month. Pneumonia is another disorder in which this treatment is of value, as also in local septic infection, chronic and acute nephritis and a number of other diseases which he lists. It acts as a direct stimulant to cell metabolism in the part treated, and produces reflex local hyperemia which with stimulation of the trophic nerve supply results in increased nutrition. If hyperleucocytosis is not already present the number of leucocytes is rapidly increased from 15 to 20 per cent, though if it is present there may be no increase at all. The red blood cells are increased from 10 to 20 per cent. The quantity of urine passed is increased as well as the amount of excretion of urea. The mouth temperature rises from 1 to 5 F., the pulse is accelerated, respiration deepens, and the capillary areas become injected. Perspiration is markedly increased and more acid. The oxidation of effete matters and the general functional activity of every organ and tissue in the body is augmented without and subsequent reactionary debility. Skinner describes the technic and remarks as regards the criticism that the results are not permanent, that in cases in which the condition apparently came back after treatment, the thermal agent was not properly supported by later treatment.

32. **Atmospheric Pressure in the Hip Joint.**—Allen reviews the statements as to the atmospheric pressure in the cotyloid cavity and has experimented with cadavers, successively cutting the muscles, capsular ligament and cotyloid ligament. The results of his experiments are that what holds the bone together is primarily the cotyloid and secondarily the capsular ligaments (in life elasticity of the surrounding structures helping them out), and that the air pressure need not be considered.

33. **The Doctor in the Navy.**—Nute gives a general description of the methods of becoming an assistant physician in the Navy and the advantages of the service.

Cincinnati Lancet-Clinic.

April 11.

37 *X-Ray Phenomena and Phenomena Not Due to X-Rays. Percy Shields. For What Conditions and How Should the X-Rays Be Used? Edw. H. Shields.
38 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Surgery of the Pancreas). B. Merrill Ricketts. (Continued.)

37. **The X, or Cathode Rays.**—According to Drs. Shields it is not the x-ray but the cathode ray which is curative in malignant disease. They summarize their statements as regards the phenomena due to the x-rays and those not due to this agent as follows:

1. Relief of pain is due to the action of a high-tension current and connected in no way with x or cathode rays.
2. Cathode rays are the therapeutically active agents in the treatment of disease.
3. Affections beneath the surface, as deep-seated carcinoma, are in no wise affected by x-rays or cathode rays.
4. The only phenomenon which can be ascribed to x-rays is their ability to penetrate thick opaque bodies.
5. Bactericidal properties of x and cathode rays are *nil*.

As regards the therapeutic uses and methods they offer the following:

1. Superficial growths, both benign and malignant, can be relieved and often cured by the escharotic effect of the cathode ray.
2. Any lesion of the skin which can be relieved or cured by causing a superficial sloughing constitutes an indication for the use of the cathode rays.
3. Neither the x-rays nor the cathode rays affect in any degree benign or malignant disease beneath the surface.
4. Diseases due to bacteria or fungi are not cured by the x- or cathode ray.
5. Painful neuralgic affections are usually benefited, sometimes permanently, by the use of the high-tension current, but the relief is in no way associated with the use of the x- or cathode rays.

New York State Journal of Medicine, New York.

April.

39 Our Needs—The Ideal Physician. J. W. Grosvenor.
40 The Significance of Oxaluria. J. Bergen Ogden.
41 The Prognostic Significance of Albumin in the Urine. Edward W. Lambert.
42 *The Symptomatology of Colds. George F. Cott.
43 *The Treatment of Colds. A. Alexander Smith.

42. **Colds.**—Cott notices the symptoms to which patients give the name of colds and points out that they are never of primary origin. We should remove their cause and the patient will then be free from the symptoms described.

43. **Treatment of Colds.**—Taking the treatment as usually understood by the laity, Smith holds that bathing the upper extremities, even including the head, is a certain amount of protection against taking cold. He is a strong believer in the communicability of colds, and is confident that in many cases fatigue and exhaustion diminish the resistance and render the persons more liable. The first thing he does is to take the temperature, and if it is above 100 F. he insists on the patient remaining at home, and better still in bed, if only for two or three days, which in the end saves time and the patient is much more comfortable. He is also sure that the traditional and orthodox use of opium and quinin, not in very large doses, but say 5 gr. of quinin, with 10 gr. of Dover's powder, with possibly a hot drink and hot mustard foot bath are often efficacious Frequently no further treatment will be required. The almost universal habit of giving cathartics at the beginning of treatment is to be commended. He also mentions the rhinitis tablet which has been in vogue, consisting of quinin, camphor and belladonna. If these can be taken during the first six hours, a half-strength tablet every hour for six doses, and then once every three hours until six more have been taken, it will often break up the cold. If, however, the cold has already lasted twenty-four hours, he prefers to use other remedies. It is necessary to produce at least slight physiologic effects of the belladonna with these tablets. Another method he has found very satisfactory is alkali given at the earliest possible moment, a dram of bicarbonate of soda in half a glass of water, and repeating the dose in one hour. If after twenty-four hours the cold does not seem to be better, this alkaline dose should be repeated. The salicylates are often useful, and he has seen cases where the inhalation of camphor fumes, with a few drops internally, gave great relief. The combination of one of the coal tar preparations, preferably phenacetin or acetanilid in small doses, with quinin often proves very beneficial when the skin is dry and hot and there is stuffiness of the nose, with muscular pains and headache. They seem, however, to prolong convalescence. In the majority of simple catarrhal colds no treatment except attention to the simplest rules of hygiene is required. In colds of moderate severity with a tendency to an excess of mucopurulent secretion, he has found great benefit from the creosote preparations. Carbolic acid has disappointed him. In children small doses of tincture of aconite will often be found useful. He gives it in doses sufficiently small to allow its repetition every hour and prefers it to any of the disagreeable tasting preparations for children under twelve years of age. He does not believe in the local treatment of colds. If there is a special tendency to recurrence he has seen much benefit from the use of tincture of chlorid of iron for two or three days only in large doses. He uses in such cases twenty minims every two hours, but after the second day it produces severe headache and must be discontinued. Another agent of value is cod liver oil In convalescence it is often of the greatest service to produce an absolute cure, and often prevents recurrence. Where the patient will not take this he gives quinin in small doses or some of the vegetable bitters.

Archives of Pediatrics, New York.

April.

44 *The Medical Treatment of Tuberculous Peritonitis in Children. Leonard Guthrie.
45 *Autopsy Statistics at the Children's Hospital with Reference to Tuberculosis and Its Etiology. Alfred Hand, Jr.
46 *Sterilized Milk, Pasteurized Milk or Clean Milk? E. W. M. Brown.
47 Brachial Monoplegia in the Course of Chorea Minor. Francis Huber.
48 Report of a Case of Sinus Thrombosis Resulting in Extensive Cerebral Hemorrhage in an Infant Fifteen Days Old—Sigmoid Fusion of the Kidneys. Samuel M. Hamill.
49 *Note on the Temperature Curve of Acute Croupous Pneumonia in Children. Charles Goodwin Jennings.

50 A Case of Pneumonia, Probably Due to Streptococcus Infection. Walter L. Carr.
51 A Case of Retropharyngeal Adenitis and Abscess; Extreme Malnutrition; Recovery. John J. Cotter.

44. **Tuberculous Peritonitis.**—Guthrie finds that in 41 cases of tuberculous peritonitis treated at the Paddington Green Children's Hospital 14 underwent laparotomies and 7 of these died, while of the remaining 27 treated medicinally, only 4 were fatal. He says that as regards medicinal treatment we can not kill the tubercle bacillus. Arsenic might possibly affect the course of tuberculous peritonitis, but he knows of no other drug. We have chiefly to treat the symptoms. The patient is relieved of pain by rest in bed and local applications. Flatulency and indigestion need a careful diet. Diarrhea needs no active treatment unless profuse. A loaded rectum should be cleared by enemata rather than a purgative, but an occasional dose of castor oil or compound licorice powder may be given with no evidence of ulceration. We must remember, however, that ulceration may exist without such evidence. For ascites there is a question whether diuretics are indicated, but they can hardly be recommended as a routine practice. Vomiting is seldom excessive unless intestinal obstruction occurs, and then surgical aid is to be invoked. It is seldom necessary to have the diet entirely fluid. In every case rest in bed, at least in the early stages, is essential. The medicinal treatment consists in simply keeping the patient at rest, giving abundant and nutritious diet, relief of incidental symptoms as they arise, and the advantages of open country air. For ascites in acute cases, unless fluid produces great distention and distress, it is inadvisable to interfere, for if removed it will speedily reaccumulate In chronic cases where there is no tendency to subside, it should be withdrawn. Guthrie's theory is that laparotomy is beneficial in tuberculous peritonitis simply because it lets out the fluid. Dry cases without complications would recover equally well if let alone.

45.—This article appeared elsewhere. See The Journal of April 18, ¶57, p. 1106.

46. **Milk.**—Brown summarizes his conclusions on the subject of Pasteurized or sterilized milk: Sterilization at 212 F. is of great value because of its unversal practicability. Pasteurization at a temperature of 140 to 158 F. in closed vessels for fifteen minutes is much better, though we must admit that the heating of milk sufficient to kill bacteria does impair its nutritive value to some extent. When obtainable, clean pure milk used raw is much better and there is a rising demand for it. It may be provided in all cities or towns of even moderate size if the profession will demand it.

49. **Croupous Pneumonia in Children.**—Jennings gives temperature charts of five cases of croupous pneumonia, showing the sudden drop of temperature on the second to the fourth day which has confused the diagnosis in many cases. With this drop of temperature there is no change in the respiration or pulse curve, but these both sharply rise at the end of the remission

American Journal of Insanity, Baltimore.

January.

52 *The Insane in Brazil. W. H. Kidder.
53 *A Contribution to the Chemistry of Nerve Degeneration in General Paralysis and Other Mental Disorders. Isador H. Coriat.
54 *Dermatoses of the Insane. James MacFarlane Winfield.
55 *Report of a Case of Dementia Precox with Autopsy. William R. Dunton, Jr.
56 A Case of Abscess Diagnosed as Brain Tumor. Hermon C. Gordinier.
57 A Case of Brain Tumor in a Woman Seventy-eight Years of Age. J. D. Madison.
58 *Acute Paresis, with Report of a Case, the Clinical History and Pathological Findings. Stewart Paton and G. Y. Rusk.
59 *On the Motor Cortex. Clarence B. Farrar.
60 A Case of Metastatic Adrenal Tumors in the Left Midfrontal and Ascending Frontal Convolutions. Walter Channing and Wallace Knowlton.

52. **The Insane in Brazil.**—Kidder gives an account of the principal hospitals as he has observed them at Rio Janeiro, where the care of the insane seems to be according to the most modern scientific methods. In Bahia, on the other hand, the conditions are not so satisfactory, owing to the lack of proper legislation on the subject. The private institutions also in Rio Janeiro are in a creditable condition. In a very large part of the territory there is but little done. Away from the great centers of the population, removal of insane persons to central institutions is practically impossible owing to the expense. The death rate is large, but this is chiefly due to the tardiness in commitment, so that many patients are in a hopeless condition when taken to the hospital. Popular education will have to be depended on to correct this fault. There are also many grave somatic diseases due to the tropical climate which also increase the death rate.

53. **Nerve Degeneration.**—Coriat has elaborately examined the cerebrospinal fluid in a number of cases, including some 14 of paresis, others of melancholia, dementia precox, senile dementia, toxic delirium, alcoholic insanity, etc. He finds cholin present in the fluid in all the paretics and in several of the other cases. It is absent, however, in some cases of melancholia, toxic delirium, senile dementia, alcoholism, epilepsy and dementia precox. In a total of 34 cases it was absent in 11, present in 23. In one case it was also demonstrated in the blood, and in 6 cases of paresis it was found both in the fluid and in the brain tissue. He considers that the findings furnish a safe guide for the differential diagnosis between organic and functional nervous and mental disorders, which can be utilized during life by the method of lumbar puncture. Cholin seems to be present at any period of myelin degeneration.

54. **Dermatoses of the Insane.**—In 1,000 cases of insanity, nearly one-half of these terminal dements, 146 cases of pure skin disease were found, most of them in the dement cases. In some of the latter the disorder was from external causes and contracted before entering the institution. Winfield criticises the statements of alienists regarding cutaneous stigmata. He thinks their remarks in regard to telangiectasis and moles should be amended, though, in fact, such conditions are among the more frequent. Atrophy of the skin and hypertrichosis were the two other disorders most frequently found, and chiefly in terminal dements. The majority of cases occurred in females. The eight men thus marked had thin and coarse beards, but their bodies were thickly covered with hair, especially over the spine. Twenty of the women had a copious growth of thick stiff hairs on their lips and chins. In one case this symptom appeared during an attack of melancholia and disappeared on recovery. The statements made as regards a distinctive odor of the insane should be eliminated, he says, from text-books on insanity. Under modern cleanly treatment there is no cause for such a symptom to exist.

55. **Dementia Precox.**—In the case reported by Dunton, the autopsy showed slight cell changes in the brain, generally distributed, though most marked in the first frontal convolution. The cells showed central chromolysis, perhaps a little pale yellow pigmentation, atrophy, dislocation and swelling of the nucleus, folding of the nuclear membrane and an endonucleolus. The deeper layers were most affected as a rule. The motor cells showed very slight changes There was a slight increase of neuroglia nuclei. Phagocytosis was well marked, and there was considerable cell disintegration. There was no change in the medullated fibers, and no marked vascular changes. While no positive inference can be drawn from the findings, he thinks they may be suggestive in connection with further work.

58. **Acute Paresis.**—From a study of the cases here reported, Paton and Rusk conclude that it is probable that this type is less frequent than has been commonly supposed. To place a case under this class we should not only exclude the subacute or chronic initial period, but the acuteness or chronicity of the pathologic process in the central nervous system must be carefully considered. The pathology is not characteristic. A general and not localized disappearance of the fibers from all cortical areas was observed, but it is not pathognomonic. The neuroglia showed an increase of the cellular elements, with little if any increase of the fibers. There was some overfilling of the blood vessels. Many round nuclei were found in the perivascular spaces. Numbers of plasma cells were observed in the cortex. The character of the changes in the various organs, as well as in the central nervous system, suggested a general intoxication. The vascular changes of the

cortex were not sufficient to account for the degeneration of the nerve elements.

59. **The Motor Cortex.**—Farrar's article is a critical review and summary of the literature on cerebral localizations. He points out that the motor cortex occupies the middle region of the hemispheres, is the earliest to functionate, and the central sulcus gives increased room for its developing elements. This area has been gradually narrowed, until now the post-central gyrus is practically excluded. Cajal has described a specific fiber distribution in the precentral convolution, which he thinks serves to differentiate it as the motor type of cortex. That a motor type exists is proven; it is characterized by its unusual width dependent on the marked development of the medium-sized pyramidal cell layer containing the specific plexus of Cajal, by the absence of a clearly-defined granular zone, and by the presence of giant cells in the sixth layer with thicker and denser radial bundles and a richer development of the overlying tangential fibers, which are of maximum density in those parts which contain the greatest number of giant cells. Beyond the limits of the motor area in all directions, one observes a gradual change in the cortical type, the third layer becoming narrower, the fifth wider, and the specific elements of the sixth disappearing. This is recognizing eight layers of the cortex, according to Cajal. The paracentral lobe represents both types of the cortex, the transition taking place below the extremity of the fissure of Rolando, although no surface marking determines the boundary.

Maryland Medical Journal, Baltimore.

April.

61 A Fatal Case of Schönlein's Disease. William T. Watson.
62 *The Prognosis of Chronic Otorrhea. H. O. Reik.
63 *Perforating Wounds of the Crystalline Lens. Geo. A. Fleming.

62. ***Chronic Otorrhea.***—*The object of Reik's paper is to point* out that the cure of chronic suppurative otitis media is not, by any means, as hopeless a matter as is often regarded, and to call attention to the recent methods. He thinks about one-half of the cases call for some surgical treatment, either major or minor, including among the latter removal of polyps and cauterization. In most instances ossicular necrosis exists and the removal of the diseased bones permits of cure through improved drainage and better cleansing of the tympanum. About 50 per cent. of the one-half requiring surgical operation will be relieved in this way. In the remainder the radical operation will have to be performed, and he thinks that, as the surgeon becomes more familiar with the technic, the 2 or 5 per cent. of cases now recognized as incurable will be still further diminished.

63. **Injuries of the Crystalline Lens.**—Fleming reports three cases, in all of which there was considerable inflammatory exudate involving at least one-third of the lens, yet the latter cleared up with recovery of the normal transparency and function.

Journal of Nervous and Mental Disease, New York.

April.

64 *Reversals of Habitual Motions, Backward Pronunciation of Words, Lip Whisperings of the Insane, Sudden Failures of Volition, Repetition Impulses. S. Weir Mitchell.
65 A Case of Multiple Fibromata Confined to the Internal Plantar Nerve. Wm. J. Taylor and Wm. G. Spiller.
66 A Case of Myasthenia Gravis Complicated by Angioneurotic Edema. Theodore Diller.

64. **Reversal of Habit, etc.**—Mitchell's paper contains some interesting reports of cases of patients with cerebral disorders in which the symptoms were the complete reversal of the usual habitual actions. He mentions one patient with tumor of the brain who pronounced all his words backward, and it was only by close study that this was discovered. Such expressions as "dog ho" and "tacym" were finally interpreted as "Oh! God," and "my cat." There were other cases where paraphasia took the form of the exact reversal of the sense intended. He also notes some peculiar obsessions, many of which seem to have escaped study.

Journal of the Michigan State Medical Society, Detroit.

April.

67 *Intratympanic Injections of Pilocarpin in Chronic Catarrhal Deafness. Robert W. Gillman.
68 Treatment of Puerperal Sepsis. William F. Metcalf.
69 Observations on the Technic of Abdominal Surgery. H. O. Walker.
70 Uremia in the Process of Childbearing. Earl Bigham.
71 *Enteroptosis and Pregnancy. Charles D. Aaron.

67. **Pilocarpin in Catarrhal Deafness.**—Gillman has used intratympanic injections of pilocarpin in many cases of catarrhal deafness from otitis, first introducing the eustachian catheter and forcing the solution into the middle ear by the Politzer bag. He reports two cases, and concludes that it is absolutely effective in certain instances, together with allied treatment; in others it may simply avert the worst consequences, while, perhaps, in the larger number it is ineffective.

71. **Enteroptosis in Pregnancy.**—Aaron reports two cases of enteroptosis which were largely benefited by pregnancy. He remarks, in conclusion, that dispensing with the abdominal bandage, according to the new method, predisposes to enteroptosis, while the ordinary pregnancy assists its cure, and patients in this condition need not hesitate to become pregnant. The disagreeable symptoms of the condition seem to disappear during the pregnancy, and keeping the patient in bed after the delivery and applying an effective bandage is very helpful in its permanent cure, while early convalescence and insufficient support have the opposite effect.

Laryngoscope, St. Louis.

March.

72 *The Anatomy of the Sphenoidal Sinus and the Method of Approaching It from the Antrum. Harris P. Mosher.
73 The Treatment of Abscess of the Septum, with Special Reference to the Prevention of Subsequent Deformities. C. G. Coakley.
74 *The Cold Snare in Tonsillotomy, with Exhibition of Instrument. H. L. Myers.
75 *Alarming Hemorrhage Following Excision of Tonsils and Adenoids. Albert E. Bulson, Jr.
76 The Hypertrophied Faucial Tonsil, with a Report of the Morbid Histology of the So-called Submerged Tonsil. Ellet O. Sisson.
77 A New Mechanical Saw for Intra-Nasal Operations. Edwin Pynchon.
78 A New Postnasal Applicator. J. C. Buckwalter.

72. ***The Sphenoidal Sinus.***—Mosher's article is an elaborate, illustrated description of the anatomy of the sphenoidal sinus, and he gives the measurements by the nasal route and the antrum, favoring the latter as a means of approaching this cavity. Through the nose, the lower anterior edge of the face of the sphenoid, as he measures it, is 2¼ inches, and from the middle of the canine fossa, 1½ to 2 inches. The route to the sphenoid by way of the antrum is, therefore, the shortest and most direct. By it the operator has two guides to the lower edge of the sphenoid, the finger in the mouth at the upper rim of the choanæ and the level given by the incision made from the ostium backward through the membranous area. By this route three of the four accessory sinuses of one side can be opened up. The sphenoid sinus of the opposite side can also be opened and, experimentally on the cadaver, in many cases, the frontal sinus. In combined empyemata of the antrum, the ethmoid region and the sphenoid, he thinks this method is the one for reaching the parts. The paper concludes with a very extensive bibliography.

74. **The Cold Snare in Tonsillotomy.**—Myers has used the cold snare for some time, and believes it to be the best instrument for the removal of the tonsils. It is adapted to any tonsils that require removal; the half buried, flattened and hard tonsils which no tonsillotome would reach, are very readily removed by the properly constructed snare, by the additional use of a small tenaculum to draw the tonsil from its bed into the loop. Under local anesthesia it is not a severe operation, and he has never seen the tonsil too hard to be severed. He passes the loop over the tonsil, packing it in with the tenaculum, then slightly contracts the loop to test its hold, then the tenaculum is dropped and both hands are used to close the loop.

75. **Hemorrhage After Tonsillotomy.**—Bulson reports a case of alarming secondary hemorrhage, which he had considered as a rare occurrence, but which he now thinks is a very possible one. The child may be swallowing blood for some time before the hemorrhage is detected. He thinks it was an error of judgment in his case not to pack the post-nasal space before or

immediately after the hypodermoclysis which was used in the treatment, as the secondary hemorrhage caused by the raising of the blood pressure came from that region. Transfusion or saline injection should not be given without knowing that all the bleeding parts are under control.

Ophthalmic Record, Chicago.

March.

79 Confessions of a Traveler. (To be continued.) Albert B. Hale.
80 A Modification of the Perimeter, with Electric Transillumination of the Mires. Eugene R. Lewis.
81 *Changes in Refraction. S. D. Risley.
82 The Implantation of a Ball of Solid Paraffin to Secure a Prominent Stump After Enucleation of the Eye. Francis W. Alter.
83 A Clinical Note on the Treatment of Panophthalmitis by the Method of Van Milligen. William Zentmayer.
84 Improved Tendon Tucker. Frank C. Todd.
85 Hemorrhage from the Eye After Cataract Extraction. Swan W. Burnett.

81. **Changes in Refraction.**—Risley remarks that he originally believed that static refraction of the eye was a fixed of immutable quantity, and he was inclined to consider differences which he found from those of other observers due to an error of observation. He reports four cases, however, where a marked change in refraction occurred under his own observation, and remarks that we should have more charity with the early work of others and ourselves in such cases. While he still believes that in the vast majority of cases no change occurs, there are numerous exceptions to the rule.

Toledo Medical and Surgical Reporter.

April.

86 *Cardiac Complications in Rheumatism, with Report of Cases. Helen M. Nolen.
87 *Gastric Muscle Fatigue and Dilatation. Fenton B. Turck.
88 *The Regulation of Barber Shops. W. E. Hartman.
89 Fundus Lesions and Their Relation to General Diseases. (Concluded.) George F. Suker.

86. **Rheumatism.**—Nolen insists that the heart is involved in the vast majority of cases of rheumatism, chiefly by endocarditis; pericarditis is next in frequency, and, in this case, more often in the male. The younger the patient and the more severe the attack, the greater the liability to heart complications. She insists on the importance of early recognition of cardiac involvement by daily systematic and thorough examinations, and, if it is detected, treatment by absolute rest.

87. **Gastric Myasthenia.**—Turck describes this condition, chiefly due to frequent overloading of the stomach. We should differentiate between gastric fatigue caused by excessive work, that caused by some toxin and that due to obstruction of the pylorus. He describes his method of treatment by gastric dilatation and disinfection with superheated air charged with oil of cloves, etc. He advocates this pneumatic gymnastics of the stomach, which he thinks has a powerful effect on the circulation not only of the sphlanchnic system, but also on the general circulation. It has been found, he says, in the less severe cases, that a few of these treatments combined with careful diet and the measures that would naturally be enforced will cause the stomach to empty itself normally, and such treatment, carried on over a somewhat protracted time, will result in a permanent cure. For the diet he would first use raw eggs and coagulated milk; later chopped meats and bran are added to the diet. A period of rest should be allowed between the times of feeding At the outset in many cases but one meal a day is allowed, followed by two meals daily for a long time.

88. **Barber-Shop Regulation.**—Hartman pleads for sanitation and disinfection of barber shops, care as to cleanliness, disinfection of tools, etc.

American Practitioner and News, Louisville, Ky.

January 15.

90 Carcinoma in Women: Some Clinical and Pathologic Aspects. John R. Wathen.
91 Myelopathic Albumosuria. T. R. Bradshaw.
92 Two Cases of "Relapsing" Gastric Ulcer. J. Hill Abram and W. Thelwall Thomas.

Northwestern Lancet, Minneapolis, Minn.

April 1.

93 Some Remarks to the General Practitioner as to the Treatment of Acute Inflammation of the Ear and Mastoid, Following the Grip. H. McI. Morton.
94 Colorado Springs as a Health Resort for Consumption, Asthma and Hay Fever. Harlan Trask.

Journal of Advanced Therapeutics, New York.

April.

95 Phototherapy—A Ten Years' Retrospect. Margaret A. Cleaves.
96 The Development of the Radiograph. George C. Johnson.
97 The Relationship of Psychic Suggestion to Electro-Therapeutics. Maurice F. Pilgrim.
98 Roentgen Ray Therapy and Technic. Albert Solland.

Annals of Gynecology and Pediatry, Boston.

April.

99 The Surgical Treatment of Gallstones. Stephen H. Weeks.
100 Report of a Case of Fracture of the Humerus in a Newborn Baby Occurring During Labor, with Remarks on Fractures in the Newborn. Louis Fischer.

Transactions of the Chicago Pathological Society.

February 9.

101 Preliminary Report on the Action of Neurotoxic Serum. H. T. Ricketts and T. Rothstein.
102 The Condition of the Pelvic Lymphatics in Carcinoma of the Uterus. Emil Ries.
103 Bacteriologic Studies of the Skin and Throat in Cases of Scarlatina. George H. Weaver.

March 9.

104 A Case of Gigantism and Leontiasis Ossea. Peter Bassoe.
105 Experimental Cirrhosis of the Liver in Chronic Albumose Intoxication. H. Gideon Wells.

The Post-Graduate, New York.

April.

106 On the Diagnosis of Heart Diseases. Thomas E. Satterthwaite.
107 A Clinical Consideration of Sterility in Women. James N. West.
108 Conjunctivitis as the Result of Fast Riding in Automobiles. A. Edward Davis.
109 Clinical Lectures. (Tumors, Suppurating Glands, etc.) Seneca D. Powell.

New Yorker Medicinische Monatschrift.

February.

110 Das Carcinom, Seine Frühzeitige Diagnose und Operative Entfernung. Leonard Weber.
111 Aerztliche Ethik. E. A. Fischkin.

Medical Standard, Chicago.

April.

112 A Case of Hematemesis. Arthur R. Edwards.
113 The Treatment of Carbuncle. B. Brindley Eads.
114 Practical Dietetics. A. L. Benedict.
115 General Massage with the Inunction of Cod Liver Oil. E. J. Kempf.
116 Speech Defects and Method of Treatment. James M. Brown.
117 Pain and Its Indications. E. C. Hill.

Medical Times, New York.

April.

118 Generation and the Law of Sex. (Part 2.) William More Decker.
119 Tuberculosis and Heart Disease—Two Great Factors of Today. Thomas R. Robinson.
120 The Study of Food and Its Adulterations. A. M. Leonard.
121 A Study of Influenza. J. R. Nichols.
122 Eruptive Fevers. T. J. Forhan.
123 Clinical Notes on Certain Diseases of the Skin. William Gordon.

Merck's Archives, New York.

April.

124 Neurasthenia in the Male. (Continued.) H. Edwin Lewis.
125 Pathology and Treatment of Gout. H. Strauss.
126 An Index of Diseases Alphabetically Arranged, with Their Modern Treatment. (Continued.) G. Bjorkman.
127 Ichthalbin and Its Therapeutic Applications. Julian Marcuse.

St. Louis Courier of Medicine.

April.

128 Treatment of Fibromyomata Uteri by Electricity. F. C. Ameiss.
129 Two Cases of Tetanus. Harry M. Loewenstein.
130 Vesicovaginal Fistula. Francis Reder.
131 Submucous Fibromyoma Deeply Seated in the Anterior Uterine Wall Expelled by Uterine Contractions. Henry Schwarz.
132 Hypertrophic Lingual Tonsil in a Child. Frank G. Nifong.
133 Two Cases of Sexual Contrariety. William S. Barker.
134 Preventive Medicine. (Continued.) B. F. Hart.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Bulletin de l'Acad. de Medecine, Paris.

1 (No. 10, March 10.) *Instrument for Locating Bullets in the Skull. Rémy and Peugniez.—Extirpation des projectiles logés dans l'encéphale.
2 Report of Delegate to International Congress of Gynecology, Rome, Sept. 15, 1902. A. Pinard.
3 *De l'adénopathie axillaire au début de la tuberculose du poumon. C. Fernet.
4 *Resolutions Voted by Académie in Regard to Absinthe, Liqueurs and Dram Shops in General.

5 (No 11) Medical Notes from Exploring Party in Central Africa E Brumpt
6 *Relation d'une série d'expériences faites en vue de la recherche d'un sérum antituberculeux Viguier de Maillane
7 *Steam of Hydrogen Dioxid for Inhalations Magnet and Planté —Vapeurs d'eau oxygenée etc
8 *La tuberculose dans l'étiologie des maladies mentales et nerveuses Anglade and Chocraux
9 Infant Hygiene —Sur l'alimentation des enfants des nourrices et des enfants protégés

1 **Apparatus for Locating Bullets in Skull**—The main advantages of the simple apparatus presented are that it dispenses with calculations and the necessity for an assistant, and that the fluoroscope is placed between it and the subject Two long rods are mounted on a vertical standard They are slipped back to allow the interposition of the fluoroscope, and after the vacuum tube has been adjusted to cast a shadow of the bullet on the point of each rod in turn, the fluoroscope is removed, the rods slipped forward until they touch the skull, and the bullet is located at the intersection of the prolongation of their axes Trouvé's "alarm probe" has been modified in connection with this apparatus, so that, substituted for one of the rods it serves as a probe, gives warning when the bullet has been reached, and also seizes it when the foreign body can be withdrawn with the probe The apparatus is illustrated in the original

3 **Axillary Adenopathy in Incipient Tuberculosis of Lung**—Fernet calls attention to the information to be derived from examination of the glands in the axilla in incipient tuberculosis Enlarged movable glands, the size of a pea or larger, have usually coincided in his experience with a cervical adenopathy on the same side, and testified to the existence of some incipient tuberculous lesion in the corresponding lung These glandular lesions never give trouble and probably retrogress later, as he has never found them in later stages of the disease

4 **Text of the Antiliqueur, etc, Resolutions**—The Academie declares that all natural or artificial essences, without exception, as well as the extracted substances, incorporated with alcohol or wine, constitute dangerous and harmful beverages They are dangerous both on account of the essences and of the alcohol they contain, and they should be prohibited, or at least a prohibitory tax imposed The Academie calls particular attention to the danger of the "apéritifs," that is, the beverages with essences and alcohol taken on an empty stomach The fact that they are taken before meals renders their absorption more rapid and their toxicity more active The Academie also voted a resolution urging that effective measures be taken to diminish the number of dram shops These resolutions were passed on the request of the government, which applied to the Academie for advice in the matter, suggesting that two lists should be drawn up, one to include the dangerous essences and the other the least injurious The Academie decided that where all were harmful it was unwise to discriminate

6 **Antituberculosis Serum from Fowls**—The curative serum made by Viguier de Maillane from the serum of fowls was mentioned in THE JOURNAL of April 11, p 999 The technic of its preparation was given, but is not published in the "Bulletin," as the communication was referred to the tuberculosis committee

7 **Steam of Hydrogen Dioxid for Therapeutic Inhalations.**—Maget and Planté have found that enough of the oxygen is retained in the steam from boiling hydrogen dioxid to render it a valuable therapeutic agent They have applied it in veterinary practice and also on patients with chronic tuberculous laryngitis, and the improvement noted testified to the efficacy of the measure They found that a strength of 9 to 11 volumes gave 2 to 4 volumes in the distillate, but averaged 1 and 2

8 **Tuberculosis in Etiology of Mental and Nervous Diseases.**—Anglade and Chocraux believe that tuberculosis occurs in an excessive proportion in the antecedents or present condition of persons affected with mental or nervous diseases They call attention to the frequency of tuberculous parentage in mania and melancholia A subject with general paralysis, if not syphilitic, is almost inevitably tuberculous, and frequently both combined Epileptics, idiots, etc, often have a tuberculous taint or die tuberculous On the other hand, Anglade's method of staining the neuroglia has shown that epilepsy and imbecility coincide with an excess of neuroglia, and that this proliferation of neuroglia constitutes the true encephalitis of general paralysis and the pseudo encephalitis of mania and melancholia. He has also demonstrated that tuberculosis has toxins capable of inducing in an extreme degree this diffuse neuroglic reaction in both cortex and ependymis They consider, therefore, that tuberculosis may possibly be responsible for a large number of cases of mental and nervous disease It kills a certain part of the population and renders another part epileptic, insane, idiot or subject to some other mental or nervous affection, possibly by its action on the embryo Raymond, in presenting their communication, stated that he does not accept their conclusions as fully established, but still advises to bear in mind the possibility of tuberculosis in the pathogenesis of mental and nervous affections in general, although he doubts whether it will ever assume as important a place as that accorded to syphilis and alcoholism in the genesis of these affections

Semaine Medicale, Paris.

10 (XXIII 11) *Un projet de vaccination antituberculeuse des nourrissons (nurslings) L Cheinisse
11 Letter from America (Cleveland) F Munch—L'injection intraveineuse d'adrénaline, associée au massage du coeur et à la respiration artificielle comme moyen de traitement de la mort apparente
12 Ibid (Chicago) L'asepsie opératoire aux Etats Unis
13 (No 12) *Chirurgie des grosses ascites F Lejars

10 **Behring's Suggestion for Vaccination of Infants Against Tuberculosis**—Cheinisse reviews all of Behring's communications on the subject of the immunization of human beings and cattle against tuberculosis, referred to in editorial in last issue He uses for cattle a culture of human tubercle bacilli on glycerinated serum, desiccated in a vacuum at ordinary temperature Of this desiccated culture 004 gm are injected into the jugular vein of a calf less than three months old, after the bacilli have been ground in a mortar and emulsified in 4 c c of a 1 per cent saline solution The amount injected is equivalent to 02 gm of a fresh culture, but the desiccation reduces the virulence of the bacilli A month later 01 gm of the same culture, but fresh, is injected in the same way. The animals are then immune and placed in the midst of infected herds for months to a year have shown no traces of tuberculosis when slaughtered As intravenous vaccination of infants is out of the question, Cheinisse hails as ripe with promise his suggestion, mentioned in our editorial, p 1083, that possibly equally favorable results might be obtained by feeding infants on milk from immunized cows

13 **Surgery of Large Ascites**—Lejars advocates laparotomy in all cases of extensive ascites of doubtful origin He describes a number of instructive cases The abdomen in one measured 94 cm at the umbilicus, but nothing abnormal was discovered at the laparotomy except adhesions between stomach and liver, possibly the result of an old, healed ulcer The ascites has not recurred since the adhesions were detached, and the patient has been in good health since He urges, in particular, early intervention in case of the ascites of cirrhosis, while it is yet time to accomplish good results After the liver has become seriously compromised little can be expected from omentopexy as a last resort He quotes, with approval, Harris' article in THE JOURNAL of May 3, 1902 In many cases supposed to be of a tuberculous or carcinomatous nature, the laparotomy will reveal the welcome suprise of some comparatively insignificant lesion He affirms that the well established fact of the benefit derived from a laparotomy in tuberculous peritonitis is by no means confined to the tuberculous form Every chronic peritonitis, whatever its nature, is susceptible of improvement from it In one case of diffuse carcinosis with extensive ascites of the abdomen the patient was remarkably improved by a laparotomy and drainage, and survived six months in comparative comfort. The surgeon in such cases should not attempt to disturb the conditions, but merely drain with strict asepsis, and general anesthesia is not necessary He has collected 78 cases in which Talma's operation was performed, but as it was done as a last resort, the proportion of 28 cured and 14 much improved does not represent the actual value of the intervention He has done it three times himself

Archiv f. Verdauungskrankheiten, Berlin.

14 (IX, 1.) *Ueber Fistula gastrocolica carcinomatosa. P. Koch.
15 Fall von Magen- (stomach) Carcinom mit erfolgreich (successfully) operierter Fistula gastrocolica, und zwei später spontan entstandenen (2 spontaneously occurring) Gastroenterostomien nach Hacker'schem Typus. G. Kelling.
16 *Ueber eine neue Anwendungsform (form of application) des Gelatose-Silber-Nitrats (Albargin-Höchst). Zur Behandlung der Dickdarmerkrankungen (affections of large intestine). W. N. Clemm.

14. Gastrocolic Carcinomatous Fistula.—Koch has had occasion to observe two cases of this condition in Erb's service at Heidelberg, and has collected 68 others. He tabulates the details of the 70 cases. The interval between the first symptoms of the fistula and death ranged from six days to two and a half years Not all were cancerous; in 20 per cent. an ordinary ulcus was the cause, tuberculosis in a few, and in one the fistula was congenital. The gastrocolic fistula may develop without any symptoms, as in Aron's case, in which edema of face and legs, an effusion in the abdominal cavity and pleura and the waxy complexion were the only clinical manifestations except weakness and loss of appetite. There had never been pains in the stomach, vomiting or fever, and yet the autopsy revealed a carcinoma with a broad fistula into the colon. Fecal vomiting is the most constant symptom, but it might be prevented by complete stenosis of the pylorus or by an unusually large fistula, both of which favor the occurrence of diarrhea with undigested food, lientery, which is the second most characteristic symptom. The third is the identity between the vomit and the diarrheic stools. Accessory symptoms are the rapid emaciation, excessive thirst, fecal odor of mouth and eructations. Another symptom is the abrupt cessation of long continued vomiting of food. If gastric juice can be detected in the stools the diagnosis is confirmed, as also flatus per rectum after inflating the stomach. Sometimes a metallic ringing and gurgling sound can be heard. A stained fluid injected under pressure into the rectum may be voided by the mouth, or fluid introduced by lavage of the stomach may be siphoned out through the rectum. Treatment can be only symptomatic, morphin and opium. Some have tried an artificial anus in the ascending colon or recommended partial resection of stomach and colon, but without results. One patient was conscious of the formation of the fistula, feeling as if something had burst.

16. Improved Silver Nitrate Treatment of Colitis Membranacea.—Clemm imagined that the non-irritating properties of the combination of gelatose and silver nitrate, called albargin, which have proved so useful in urology, might be equally effective in intestinal affections. Time has confirmed the correctness of this view. He substitutes it for the oil cure recommended by Fleiner and Kussmaul, and uses it for the same indications. He dissolves two albargin tablets of .2 gm. each in a little hot water and then stirs it into .25 liter of tepid water. This is injected into the rectum at night, to be retained, the buttocks raised or the subject lying on his left side, then turning on his abdomen and then on his right side. The first of these albargin injections may bring an enormous quantity of the membrane-like strips of mucus, but after this the membranes disappear from the stools with remarkable rapidity. The albargin reaches the diseased mucous membrane without irritating it in the slightest, thanks to its gelatose element, and then penetrates into the intercellular spaces, where the silver nitrate is liberated from the gelatose and acts directly on the inflamed goblet cells. If the nitrate alone were used, it would coagulate the albumin on the surface and induce irritation without the ability to penetrate into the depths. He describes 10 cases thus treated; in one instance, at least, the colitis membranacea had alternated with liver colic. All of the inconveniences of the oil treatment are avoided by these albargin injections, and they frequently succeed where the oil fails.

Mitteilungen a. d. Grenzgebieten, Jena.

17 (II, 1.) *Ueber Erkrankungen des roten Knochenmarks besonders der Wirbel, bei abdom. Typhus (marrow lesions in typhoid). E. Fraenkel (Hamburg).
18 *Ueber Dauererfolge (remote results) der internen Therapie des Ulcus ventriculi. J. Schulz.
19 *Herd- (focus) Symptomen bei Hydrocephalus acutus internus der Erwachsenen (in adults). J. A. Grober.
20 *Ueber Volvulus des Coecum und Colon ascendens. O. Wandel (Kiel).
21 Die Verbreitung (distribution) der Echinokokken-Krankheit in Elsass-Lothringen. A. Goellner.
22 *Die Behandlung der akuten Perforationsperitonitis im Typhus mittels Laparotomie und Ileostomie. T. Escher (Trieste).
23 *Ueber Fremdkörper in den Luftwegen. L. Kredel.
24 *Ueber die pyogene Wirkung (action) des Pneumococcus. E. Meyer.
25 Zur Kenntniss vasomotorischer Störungen (troubles). C. Fürstner.

17. Marrow Lesions in Typhoid.—Fraenkel has discovered what he believes to be a constant accompaniment of typhoid infection, that is, multiple foci of necrosis with deposits of fibrin, scattered through the red bone marrow, with a special predilection for the vertebræ and ribs. These foci occur from the first week of the disease late into convalescence. They may spontaneously retrogress or may continue to progress and entail clinical manifestations. They explain Quincke's spondylitis typhosa, but are more correctly entitled typhoid osteomyelitis. Fraenkel found these lesions constantly in 13 typhoid cadavers, including one subject who had died from an intercurrent pneumonia. Of the number 6 were men from 17 to 43 years of age; 5 were women from 19 to 52, and 2 were children from 1 to 10. Death had occurred in the first week in 3; in the second in 4; in the third in 4; in the sixth in 1, and during a relapse in 1. They were never found in his examination of cases of diphtheria, scarlet fever, erysipelas, phlegmons, pneumonia nor peritonitis, but Chiari has observed a similar phenomenon in variola. He studied it on 22 cadavers, and published an account of it under the title osteomyelitis variolosa. His description differs from Fraenkel's, however, in the fact that he noticed occasionally evidences of inflammation and did not find traces of fibrin. The typhoid foci are distinguished by the complete absence of any tendency to inflammation or suppuration and the constant fibrin deposits best brought out with the Weigert fibrin stain. Typhoid bacilli were found constantly in the marrow in the 10 cases examined, with the other bacillus in cases of mixed infection.

18. Remote Results of Internal Treatment of Gastric Ulcer.—Schulz reviews the results in 184 cases treated at Kast's clinic at Breslau and 107 at Hamburg. Of this total of 291 cases, 165 were dismissed as cured and 95 much improved, 15 as unimproved, and 16 died. Treatment was by the Ziemssen-Leube method. It failed, therefore, in 11 per cent., while the mortality was 5.5 per cent. He has been able to obtain information of the late results in 157 cases from six months to twenty-four years after the course of internal treatment. Only 64 per cent. have been permanently cured. The number of the uncured has increased threefold, while the number of improved has diminished by 25 to 33 per cent., and the cures are not so complete as assumed at first. The immediate results are no criterion of what may be anticipated later, and the cases that are merely improved are liable to grow worse again. On the other hand, these statistics show that, in spite of only moderate success at first and in spite of recurrence, a cure may still be effected by internal treatment, and even without this in time. The patient should not be dismissed from treatment until a complete cure has been realized If improvement is not speedily obtained the possibility of complications should be borne in mind, and other measures should be considered. He gives in his statistics the condition at dismissal and when examined later of the different cases for better comparison.

19. Focal Symptoms of Acute Hydrocephalus in Adults.—Grober's patient was a woman, aged 24, whose husband was syphilitic. The affection developed and ran its course to a fatal termination in ten weeks. Potassium iodid was administered, but without benefit. The autopsy disclosed hydrops of the ventricles, but no meningitis nor tumor, as anticipated, merely an ependymitis granulosa. Among the symptoms observed were spasms in the right face, loss of sensibility in the right supraorbital region, paresis of the left facialis and hypoglossus, knee-jerk on right side exaggerated, choked disc and vomiting. He has found only two similar cases on record, all fatal. Lumbar puncture was done once, but alarming symptoms compelled its discontinuance, although the patient seemed easier afterward. In future he should institute vigorous specific antisyphilitic treatment and at least try the efficacy of repeated small lumbar punctures.

20. **Volvulus of Cecum and Ascending Colon.**—Wandel has noticed in examining 640 cadavers that in 10 per cent. the lower part of the cecum and ascending colon was freely movable from lack of the normal fixation. This exposes the individual to the danger of displacement of this part of the bowel and he has observed in the clinic 5 cases in which this occurred. The cadavers were those of 13 male and 15 female children, 22 men and 16 women. In his clinical cases the kinking or spiral twisting on the longitudinal axis or twisting on the mesentery occurred suddenly, usually from some muscular effort in which the trunk was stretched over backward, as in trying to hit a high ball in tennis. In some cases these attacks of recurring volvulus at long intervals dated from infancy, and there was generally a history of the failure of purgatives to relieve Frequently the colic is merely aggravated by them. During the colic the subjects usually find that standing very erect or bending forward will relieve the pain.

22. **Treatment of Typhoid Perforation with Ileostomy.**—Escher is so fortunate as to be able to report 3 patients cured out of 4 on whom he operated on account of peritonitis from perforation of the bowel in the course of typhoid fever. Three were very severe cases. The patients were from 8 to 19 years of age and the intervention was required at the end of the third or beginning of the fourth week. From twenty-two to eighty hours had elapsed after the first signs of perforation except in the case of a child of 8 in whom the acute symptoms had been noted for ten hours after a suspicious stage lasting seventy-two. In reviewing the literature he has found 22 cases reported as under 18 years and only about a quarter recovered after the operation, but some required a second intervention; 1 died in a relapse and 1 passed through a serious metastatic pyemia. These results demonstrate that children are no better subjects for operation in such cases than adults. He attributes his 75 per cent. of complete recoveries to his technic. He does not attempt to suture the perforation, but merely draws the perforated intestine to the wound and sutures the loop to the skin. This saves time and rests the inflamed gut below, but its chief benefit is that it wards off the dangers of the obstruction of the bowels, which is sure otherwise to follow the perforation from partial paralysis of the bowel or other cause. There is no meteorism when this is done, no stagnation of feces, and convalescence proceeds rapidly. On the other hand, the time required to suture the perforation is a great strain on the patient, while it acts directly contrary to Nature, which seeks to relieve the paralytic ileus by opening an outlet by way of the perforation. The artificial anus created by the ileostomy should be made in the perforation and in such a way as not to interfere with the draining tamponing of the peritoneum. In case the opening afforded by the perforation alone is not sufficient, ileostomy at any other point may be done. This fastening the perforated loop to the skin, supplemented by draining tamponade of the peritoneum, is the most certain means of prevention of further spread of the peritonitis. (See editorial in last issue.)

23. **Foreign Body in Air Passages.**—Kredel warns to have everything in readiness for tracheotomy before attempting instrumental extraction. He reports 5 cases. In 3 a bean and in 2 a nail had entered the air passages. In one case the child might have been saved by proper intervention, but the symptoms were ascribed to another casual cause. In one a swollen bean in the trachea acted like a valve, causing dyspnea during expiration, along with paralysis of the lungs. In another the nail stuck between the hyoid bone and epiglottis, holding down the latter.

24. **Pyogenic Action of Pneumococcus.**—Meyer has observed 24 cases of this nature. The pneumococcus has an especially pyogenic tendency in children, with a predilection for the serous membranes, but he has observed strumitis, abscesses in mouth and bones, periostitis, arthritis, peritonitis and general sepsis from its action.

Archives de Neurologie, Paris.

26 (XXV, January.) *Etat du fond de l'oeil (condition of fundus of eye)chez les paralytiques généraux et ses lésions anatomiques initiales et terminales. Keraval and Raviart.
27 Note sur l'évolution des obsessions et leur passage au délire. J. Séglas.
28 La rééducation motrice dans les maladies du système nerveux. Ses applications à l'ataxie des tabétiques. G. Constensoux.
29 (February.) *Contribution à l'étude des folies (insanity) par contagion. G. Carrier.
30 Des obsessions et impulsions. Syndromes épisodiques chez les dégénérés. Soutzo fils.
31 (March.) *Nouvelle contribution à l'étude des psychoses post-opératoires. L. Picqué and M. Briand.
32 Sur quelques particularités de la névralgie faciale et son traitement par l'electricité. A. Zimmern.

26. **The Fundus of the Eye in Paresis.**—In an examination of 51 paretics Keraval and Raviart find that the majority were males with notable lesions of the fundus, and in only those that were in remission were they lacking. In 7 advanced cases there were 5 of white papillary atrophy, one of gray atrophy and one of posterior sclerochoroiditis of both sides without myopia. A pale disc was observed in 13 paretics. In 22 others one segment of the papilla, external, internal, lower or upper, presented a soft (flou) appearance, vaguely margined. This is the preliminary stage of papillary atrophy No cases were found in women of these slow and long-continued types of ophthalmic lesions. An ophthalmic examination was confirmed in autopsies by microscopy, and even in the mild cases there was a papillary neuroretinitis presenting the same characters of diffuse meningoencephalitis; infiltration of the noble elements of the papilla and ophthalmic nerve by connective tissue cells, thickening of the connective tissue framework of the nerve, diffuse atrophy of the ganglion cells and nerve fibers of the retina and in the more advanced cases destruction of the nerve cells of the retina and production of papillary sclerosis.

29. **Contagion of Insanity.**—The name "folie à deux" should be supplanted by the more general designation of insanity by contagion and morbid suggestion. This last designation is based on the pathogeny of the disorder and has the advantage of comprehending in the same term cases of psychic phenomena which start from morbid suggestion and all the insanities of crowds. It is necessary to separate the codeliriants in all cases of contagious insanity. It is also necessary to consider from a medicolegal point of view the subjects of the passive imposed insanities as being in the suggestive state and consequently irresponsible so far as they are in that condition.

31. **Post-Operative Psychoses.**—Under the title of post-operative psychoses Picqué and Briand include practically only the disorders of the ideational sphere. Post-operative neurasthenia should be distinctly separated from them. In the group thus limited we may separate the toxic forms and consider them apart. If they are allied in a nosologic point of view, this is not the same in practice, and uniting of the two forms obscures the questions of prophylaxis, symptomatology, prognosis and treatment. The infectious insanities are the transitory forms which may recover spontaneously in hospitals or under surgical treatment. To send them to an asylum, as is often done, is to sequestrate them unnecessarily and take them away from their needed surgical aid. The true post-operative group on the other hand is permanent and can be treated only in the asylum. The pathogenicity of these insanities varies in the two groups. In the first the insanity is exclusively infectious and may be cured by suppression of the focus. There is no history of acquired predisposition of the nerve centers, but in the second this predisposition constitutes the principal active cause. It is more particularly a hereditary degenerative weakness. The authors insist on the importance of this separation and report a number of interesting illustrative cases.

Revue Neurologique, Paris.

33 (XI, 1.) Névrite radiculaire subaigue, dégénérescences consécutives dans la moelle (in spinal cord), racines postérieures—et dans les nerfs periphériques—racines antérieures. J. Nageotte.
34 Remarques sur la pathologie des acroparesthésies. A. Pick.
35 *Quelques nouvelles données sur la physiologie des reflexes tendineux. A. E. Stcherbak (Warsaw).
36 Du parasite trouvé dans le sang (found in blood) des epileptiques. Son agglutination par le sérum des animaux infectés et par le sérum des epileptiques. Bra.
37 (No. 2.) Les lésions du système lymphatique postérieur de la moelle sont (of spinal cord are) l'origine du processus anatomo pathologique du tabes. P. Marie and G. Guillain.

38 *Cas de contracture post-hémiplegique. Apparition moins de 24 heures après (appearance in 24 hours after) le début de l'hemiplégie d'une "contracture hative" en flexion forcée et persistante du membre inférieur coexistant avec la paralysie flasque du membre superieur. Devic and Gallavardin.
39 *Pression intraartérielle dans la névrose traumatique. L. Haskovec.
40 (No. 3.) *Atrophie du cervelet (cerebellum) et sclérose en plaques (in patches). A. Thomas.
41 Nouvelles recherches cliniques sur les variations pathologiques de la courbe de secousse musculaire (curve of muscle-jerk). M. Mendelssohn.
42 (No. 4.) Compression medullaire (of spinal cord) par fracture du rachis. Paraplégie spasmodique. Laminectomie. Guérison (recovery). F. Raymond and Sicard.
43 Dégénérescences descendantes consécutives à un ramollissement (softening) du pedoncle cérébral. R. Cestan.
44 *Examen cytologique du liquide cephalo-rachidien dans le tabes. Armand Delille and J. Camus.
45 Mydriase unilaterale et corps étranger (foreign body, barley beard—epillets d'hordeum murinum) du conduit auditif externe (in outer auditory canal). J. Sabrazès.

35. **New Data in Physiology of Tendon Reflexes.**—Stcherbak has found that vibrations such as those produced by a tuning fork, are a specific stimulus to the deep nerve terminals involved in the production of the knee-jerk. A large tuning fork was screwed firm on a stout metal standard and set in motion by an electro-magnet, about 33 vibrations to the second. He applied to the standard the knee or other part of the animal to be tested, and thus made thirty-five tests on 16 rabbits. When the knee was applied, the knee-jerk was much exaggerated by the procedure. The vibrations were able to artificially "charge" the reflex apparatus with nerve energy, and percussion and passive movements were able to "uncharge" it afterward. Percussion and passive movements of the knee after the vibrations induced clonus of the knee or spasmodic trembling. These phenomena could likewise be induced by similar irritation of the other leg, exaggerating the crossed reflex. After an hour of the primary vibrations the spasmodic phenomena could be elicited as late as twenty-four days afterward by passive movements of the leg. The more intense the stimulus and the shorter the interval, the fewer passive movements were required. If the spinal cord was severed above the route of the patellar reflex, local application of the vibrations induced a durable, unilateral exaggeration of the knee-jerk, but no clonus nor tremor. Passive movements repeated even 4,300 times on one control animal never induced the clonus and tremor, while a few dozen or hundred passive movements appied to the "vibrated" animals never failed to bring the clonus even several days after the stimulus. When the vibrations were applied to the spine, spasmodic action followed affecting all the muscles in both hind legs. In short, this method of applied vibrations is able to induce in the inferior (somatic) nerve apparatus the phenomena which we are accustomed to attribute exclusively to the brain. The vibrations once applied leave traces which may remain latent for a long time, as in the psychic organ an idea or a sensation may leave a latent trace which persists through a long period and may be revived by some stimulus from the apparatus of psychic association.

38. **Post-Hemiplegic Contracture.**—The contracture appeared in less than twenty-four hours after the hemiplegia. The arm exhibited lax paralysis while the leg was flexed rigidly on the thigh. The autopsy showed the causal lesion to be a circumscribed softening of the internal capsule with degeneration of the pyramidal tract.

39. **Blood Pressure in Traumatic Neuroses.**—Haskovec found that the arterial pressure in seventeen subjects examined was not augmented but occasionally diminished. No regularity was apparent.

40. **Atrophy of Cerebellum and Sclerosis in Patches.**—Thomas adds a third to the two cases he has previously reported of what he calls "olivo-ponto-cerebellar atrophy." The clinical picture is that of the cerebellar syndrome. It has no hereditary or family features and affects elderly persons. In the case described, besides the lesions suggested by the name of the affection, he found others resembling those of sclerosis in patches, and he believes that the two affections coincided. Study of these three cases indicates that the labyrinth, the cerebellum and the cerebral cortex all participate in the maintenance of the equilibrium, and consequently lesions disseminated through these three organs entail disturbances in the equilibrium more pronounced than when the cerebellum alone is affected.

44. **Cytology of Tabes.**—In 13 cases of tabes examined, of four to forty-two years' duration, no regularity could be found in the cytology of the cerebrospinal fluid It is evident that this means of investigation has no value for either prognosis or diagnosis in such cases.

Centralblatt f. Nervenheilkunde und Psychiatrie, Berlin.

46 (Year XXVI, No. 156.) Ueber die Grenzen (limits) psychiatrischer Erkenntniss. R. Gaupp.
47 *Ueber ein eigenartiges, operativ beseitigtes katatonisches Zustandsbild. K. Bonhoeffer (Breslau).
48 Ophthalmoplegia interna traumatica. E. Schultze. One case.
49 (No. 157.) Zur Psychophysiologie des Negativismus. R. Vogt.
50 Beitrag zur path. Anatomie des Central-Nerven-Systems und des Rückenmarks. Nissl.

47. **Psychosis with Catatonia Cured by Operation.**—A man of 57 presented an intermittent psychosis with symptoms of paresis and others, resembling those of catatonia, and preceded by a long stage of alteration of character. He had a history of a severe traumatism of the head thirty years before, and the cicatrix was somewhat depressed. This region was explored after cutting an osteoplastic flap of about 50 sq. cm. The dura was not adherent, and after incising it the pia was seen to be much congested and the brain bulged out over the edges of the incision. There were no signs of a focal lesion. The pia was raised where the hyperemia was most pronounced and some of the vessels were crushed in doing this. The region corresponded to the posterior third of the second convolution. The dura was sutured and the flap lightly replaced, but not pushed down quite into its old place. This left a little more space for the brain beneath. During the twenty-one months that have elapsed since, there has been no recurrence of the psychosis or other previous symptoms but the patient has had an occasional attack of epilepsy. He has been able to resume his long abandoned occupation and the rare epileptic attacks are not regarded by his family and friends as detracting much from the success of the intervention.

Deutsche Zeitft. f. Nervenheilkunde, Leipsic.

51 (XXIII, 1-2.) Motor Disturbances with almost complete Anesthesia of One Arm After Stab Wound of Spinal Cord. A. Strumpell.—Ueber die Störungen der Bewegung bei fast vollständigen Anästhesie eines Armes durch Stichverletzung des Rückenmarkes, nebst Bemerkungen zur Lehre von der Coordination und Ataxie.
52 *Ueber Epilepsie. M. Biro.
53 Das Verhalten einiger Reflexe bei Gesunden und bei Tabes. J. Kollarits.
54 *Bemerkungen zur Früh- (early) Diagnose der Tabes. Ibid.
55 Beitrag zur Kenntniss der Myasthenie gravis mit Befund von Zellherden (cell foci) in zahlreichen Muskeln. R. Link.
56 Zur Frage der Innervation des Musculus cucullaris. Schulz.
57 Zur Kenntniss der Lähmungen (paralyses) bei der Meningitis cerebrospin. epidemica. J. Schmid.
58 Ueber Chorea mollis sive paralytica mit Muskelveränderungen (muscular changes). W. Rindfleisch.
59 *Klinische und statistische Daten zur Symptomatologie der Tabes. Die Tabes unter den Arbeitern (in laboring classes). A. von Sarbo.
60 Exp. Untersuchungen über das Verhalten der Patellar-Reflexe bei hohen Querschnitt- (transverse section) Myelitiden. R. Balint.

52. **Epilepsy.**—In Biro's experience at Warsaw with 306 cases of epilepsy he made a special study of the premonitory symptoms of the seizures and the relations between them and to the intensity of the attack. Also the relations between the bladder symptoms and biting of the tongue to other symptoms observed, as well as other details which are set forth in this article of fifty pages in length. Only 14 per cent. were weak minded. The seizures displayed a regularly ascending type in 61 per cent.; an intermittent type in 26 per cent., and a descending type in 13 per cent. In 6 cases he noticed certain post-epileptic symptoms which have previously been regarded as premonitory phenomena. In 1 per cent. the epilepsy was reflex, from adenoid vegetations, and from masturbation in the same proportion. Syphilis was certain in only 1 of the 26 patients over 30, and hereditary lues in none. Alcoholic parents were noted in 14 per cent., and 8 per cent. of all were addicted to the abuse of alcohol. Aura were noticed in 28 per cent. They usually preceded the milder seizures.

54. **Early Diagnosis of Tabes.**—Kollarits tabulates details of 100 cases of tabes studied in regard to their early symptoms. The hypotony frequently confirmed the diagnosis, also the paralysis of the ocular muscles. In one case paralysis of accommodation was the first symptom and the ocular muscles were not affected until later, when a syndrome developed suggesting Basedow's disease, exophthalmus, struma, nervous disturbances and insomnia. As time elapsed, however, the tabes became unmistakable. The patient was a woman of 24 who had acquired syphilis four years previously. In another instance the paralysis of accommodation and lack of pupil reflex, the trigeminal anesthesia and Menière's vertigo were accompanied by the Basedow triad, but the diagnosis of tabes was sustained by the speedy development of lancinating pains and absence of ankle-clonus. In another case the tabes developed at the early age of 21 soon after syphilitic infection, the early symptoms being headache at night, loss of hair and abortion at the seventh month of a macerated fetus, followed four days later by abducens paralysis and in two months with lancinating pains and gradual abolition of reflexes.

59. **Symptomatology of Tabes.**—Sarbo has had 7.4 per cent cases of tabes in 1,200 patients with various nervous affections in his private practice and 2.6 per cent. in 4,000 in hospital and dispensary patients. The proportion of men to women was 83 to 6 in the first class and 87 to 17 in the second. The age ranged from 23 to 73. The longest interval after syphilitic infection before the tabes developed was twenty-seven years and in 10 cases it was only one to five years. In 7 instances both man and wife exhibited tabes. The primary symptom in 67.5 per cent. of 195 cases was lancinating pains, while diplopia was noticed as the first symptom in 3.6 per cent., and gastric symptoms, vertigo or paresthesia were the first in 3.1 per cent. each. Weakness of the feet was the first symptom in 2.7 per cent., and bladder symptoms, gastric crises or impaired vision were each the first in 2.2 per cent. In 1.6 per cent. the girdle sensation first attracted attention; in 1.1 per cent the heart crises or painful lassitude. In .5 per cent. the first symptom noted was dyspnea, deafness, ptosis or the Argyll sign. In the total of 195 cases lancinating pains occurred at some stage of the affection in 93 per cent.; the Romberg in the same proportion and the ankle-clonus was abolished in 91 per cent. Westphal's sign occurred in 89.4 and the Argyll in 88.8 per cent.; analgesia of the peroneus region in 85.5 per cent.; bladder symptoms in 79 per cent.; paresthesia in 72; analgesia in ulnar region in 66 and atrophy or blanching of the optic nerve in 61 per cent.; anisocoria in 46.6 per cent.; bilateral myosis in 21 and mydriasis in 14 per cent.; crises in 13.7 per cent.; paralysis of ocular muscles in 10.5 per cent, and trophic disturbances in 4.5 per cent.

Neurologisches Centralblatt, Berlin.

61 (XXII, 1.) Zur Pathologie des Bekanntheitsgefühl—Bekanntheitsqualität (certainty in remembering). A. Pick.
62 Ueber eine Entwickelungshemmung der Nase (ein bisher nicht beachtetes Degenerations-Zeichen). H. Gudden. Imperfect closure of tip of nostril as sign of degeneracy.
63 (No. 2.) Ueber die Störung des Flankenganges (gait) bei Hemiplegikern. A. Schüller.
64 Ueber die Wirkung (action) des Hedonals auf den thierischen (animal) Organismus. P. S. Lampsakow.
65 Zur Frage von der autogenen Nerven-Regeneration. A. Bethe.
66 Ibid. E. Münzer.
67 Ueber hysterische Dämmerzustände ("twilight conditions") und das Symptom des "Vorbeiredens" (irrelevant answers). A. Westphal. (Commenced in No. 1.)
68 (No. 4.) Der Ursprung (origin) des Tractus isthmo-striatus oder bulbo-striatus der Taube (in the pigeon). A. Wallenberg.
69 Eine merkwürdige Complication eines ophthalmischen Migräne-Anfalles. L. Hoeflmayer. Woman of 57, unconscious for ten days.
70 Ein Ohr- (ear) Reflex. W. Alter.
71 (No. 4.) *Zur Casuistik des Verhaltens der Haare bei Geistes-Kranken (behavior of hair in mental affections). W. Heinecke.
72 Biologie und Leistung der centralen Nervenzelle. P. Kronthal.
73 Beitrag zur Lehre der Encephalomyelitis disseminata. E. Beuch. (Commenced in No. 3.)
74 (No. 5.) Ueber den Acromal-Reflex. W. v. Bechterew.
75 Ueber den Carpo-Metacarpal-Reflex. Ibid.
76 *Neue Beiträge zur Physiologie der Sehnen-Reflexe. A. E. Stcherbak.
77 Ueber Incontinentia vesicæ und Lähmungserscheinungen (paralytic phenomena) an den Extremitäten bei Erweichungsherden(in case of foci of softening) in den subcorticalen Ganglien. A. Homburger.
78 Weitere Mitteilungen über die entwickelungsgeschichtlichen (myelogetischen) Felder (fields) in der menschlichen Grosshirnrinde (in human cortex). P. Flechsig. Embryological study.

71. **The Hair in Mental Affections.**—Heinicke describes a case in which a broad band of hair became silvery during the attacks of mental excitement but returned soon afterward to its normal color. The patient was a girl of 21, of a well-to-do family, a pronounced case of dementia precox with intervals of apparent health. One or two hours before a psychic attack the white band appeared and the pupils became dilated. At the culmination of the attack the hair was almost silvery. The scalp beneath was also sensitive to pressure. The microscope showed that these hairs contained an abnormal amount of air, and if the air was forced out, the hair regained its normal blonde color. He is inclined to accept the local action of some autotoxin on the brain and scalp as the cause of the phenomena observed.

76.—Same as 35 above, only in German instead of French.

Sammlung zwangl. Abh. Nerven- u. Geisteskrankheiten, Strassburg.

79 (IV. 1.) *Ueber schwachsinnige Schulkinder (feeble-minded school children). L. Laquer.
80 (No. 2.) Limits of Soundness of Mind. A. Hoche.—Die Grenzen der geistigen Gesundheit.
81 (No. 3.) *Sedatives for the Insane.—H. Pfister.—Die Anwendung von Beruhigungsmitteln bei Geisteskranken.

79. **Feeble-Minded Children in School.**—Laquer expatiates on the extreme importance of recognizing mental deficiency during the very first year or two of school. Appropriate treatment and guidance at this early stage may accomplish wonders while the lack of it confirms the child in its morbid bent. He gives a chart for school inspectors which, if filled out from the child's first entrance into school life and carried along, would soon reveal the lack of normal brightness and the necessity for exclusion from the ordinary school routine in favor of special training.

81. **Sedatives in Mental Affections.**—Pfister has found scopolamin the sovereign sedative, preferable to all others, for the insane. He has never noted any by-effects from the daily subcutaneous injection of 1.5 to 1 mg., even when continued for weeks. It has no cumulative action, and he has never encountered a case of idiosyncrasy. Abrupt suspension causes no disturbance. It is especially valuable for the immediate soothing of very excited patients. Among the hypnotics he considers paraldehyd supreme. He gives 3 to 5 gm. in abundance of water, giving another 3 gm. in exceptionally urgent cases. In three to thirty minutes the patient drops into sleep which lasts for four to eight hours. As much as 15 gm. has been given in some cases daily for weeks without harm.

Zeitschrift f. Psychologie und Physiologie der Sinnesorgane, Leipsic.

82 (XXXI, 1.) Ueber Muskel-Zustände (conditions). C. Ruger.
83 Zur Frage der geometrisch-optischen Täuschungen (illusions). T. Lipps.
84 (No. 2.) Untersuchungen über die optische und haptische Lokalisation bei Neigungen um eine sagittale Asche (on inclination around a sagittal axis). M. Sachs and J. Meller.
85 Untersuchungen über die so-gen. Aufmerksamkeitsschwankungen (attention variations). E. Wiersma.
86 Zur Lageschätzung bei seitlichen Kopfneigungen (orientation with head inclined sideways). H. Feilchenfeld.

Rivista di Patologia Nerv. e Ment., Florence.

87 (VII, 11.) Contributo allo studio delle degenerazioni consecutive al tagilo delle radici (section of roots) dorsali. L. Tarulli and L. Panichi.
88 Note cliniche su 2 osservazioni di astasia-abasia in soggetti epilettici. G. Sanna Salaris.
89 (No. 12.) Mirror Writing and the Autonomous Graphic Motor Center. G. Pieraccini.—La scrittura a spechio ed il centro motore grafico autonomo.

Wiener Klin. Wochenschrift, Vienna.

Last indexed page 881.

90 (XVI, 6.) *Zur Früh- (early) Diagnose der Hypophysis-Tumoren. A. Fuchs.
91 Zur Kenntnis der Agglutinine und gewisser Precipitine des Blutes. A. Klein. (Commenced in No. 5.)
92 Diagnosis of Melano-Sarcoma of Choroid by Transillumination. M. Sachs.—Demonstration eines Falles von Melanosarkom der Chorioidea mit Hilfe einer neuen Durchleuchtungslampe.
93 (No. 7.) *Die Vererbung (hereditary transmission) der Syphilis. Ist eine paterne Vererbung erwiesen? R. Matzenauer.
94 *Bedeutung (importance) der Blasenscheidenfisteln (vaginovesical fistulæ) in der geburtshilflichen (obstetric) Indikations-Stellung. E. Kraus.

The Lancet, London.

April 4.

131 *The Existence of Organic Disease in the Absence of Obvious Symptoms. J. R. Bradford.
132 *Theories of Immunity and Their Clinical Application. A. S. F. Grunbaum.
133 *Further Observations on the Treatment of Smallpox by the Serum of Immunized Heifers. R. S. Thomson and John Brownlee.
134 *Ethyl Chlorid as a General Anesthetic. W. J. McCardie.
135 Operations for Rectifying Crooked and Depressed Noses. W. J. Walsham.
136 On the Use of Iodipin in Cases of Uterine Fibroid. John A. Shaw-Mackenzie.

131. **Latent Diseases.**—The subject of these diseases without obvious symptoms is noted by Bradford, who reviews the principal conditions in which this absence of symptoms may occur. In some instances the onset of acute symptoms indicates an exacerbation of the chronic morbid state and is due to a sudden increase of lesion. More often, however, it is dependent merely on progressive development of the underlying malady or it may be due to complications. The instances of latent diseases which he gives are numerous, including renal sequelæ in diseases of the bladder and pelvic organs, latent cerebral abscess as a complication of ear disease, pericarditis in renal disorders, walking typhoid, pleural effusion, which is often recognized as latent and generally supposed to be associated with pulmonary tuberculosis, latent phthisis, which may exist to a certain extent, peritonitis, which may be present in its most severe and violent forms without any characteristic symptoms, and especially gastric ulcer and malignant disease of the viscera. Many hepatic disorders run a latent course. This is not uncommon in the tropics. Gallstones produce no symptom in the great majority of cases and a patient may suffer from hepatic cirrhosis with no apparent ill effect for a prolonged period. Sometimes the patient appears to suffer from a general peritonitis dependent on perforation, but none such is found, but rather a high degree of atrophic cirrhosis. Brain tumors, nephritis and aneurism of the large cerebral vessels may also exist for a considerable time, and many diseases of the spinal cord and meninges and even the spinal column may fail to be recognized by the patient or the practitioner. Fracture of the spine as a result of sudden movement may be the first unequivocal evidence of the existence of sarcoma or other malignant disease of the bone. Kidney diseases, however, furnish the most striking and frequent examples, not only in such disorders as hydronephrosis and pyelonephritis, but also in cystic disease, and especially in granular kidney and certain forms of Bright's disease. Uremia often, in its most acute form, may be the first intimation of the existence of cystic disease of the kidneys. The great point to be borne in mind is that most of these latent disorders can be detected or, at any rate, suspected by the use of thorough physical examination. It is the symptoms, not the physical signs, that are lacking.

132. **Immunity.**—Grunbaum's third lecture treats of the actions or sera, other than antitoxic and bactericidal, incubation, protective inoculation, relapses and reinfections, predisposition, susceptibility, serum diagnosis, agglutinins, etc., all in accordance with Ehrlich's theory, which he described in his earlier lectures.

133. **Smallpox.**—Thirteen cases of smallpox were experimentally treated with large doses of serum of immunized heifers by Thomson and Brownlee. Three of these were hemorrhagic cases and all died; two of these too early for the treatment to have had any effect. Of the confluent cases, of which there were 4, 2 died; the discrete cases all recovered. The general results of the experiments were rather negative, but the authors believe that further trial is advisable. No action of any kind was observed in the hemorrhagic cases. In two cases where the serum was administered eight to eighteen days before death, no influence seemed to be exercised, although there was ample time for the serum to act. In 6 cases, where the serum was administered from four to seven days before desiccation, the course was modified, but, as 3 of these cases were vaccinated, and in a fourth the vaccination was assumed but doubtful, it is impossible to say that the treatment acted independently of anything else. In one case the serum completely failed to modify the course of a revaccination.

134. **Ethyl Chlorid.**—Having given ethyl chlorid 450 times, McCardie has never had any trouble ascribable to the drug itself. He now gives it with confidence and finds its general action on the circulation and respiration appears to be stimulative. He has not tried it in major operations, because he sees no advantage in it in such cases over ether or chloroform. It is only for short operations that it is specially beneficial. It is safer, he thinks, than ethyl bromid, as the bromid compounds have a more lasting and toxic effect than the chlorid compounds.

Indian Medical Gazette, Calcutta.

March.

137 Report on the Outbreak of Epidemic Dropsy in the Barisal Jail. R. Cobb.
138 *The Mode of Entry of Plague Infection into the Human Body. H. E. Deane.
139 An Analysis of One Thousand Consecutive Cataract Extractions. (Continued.) F. P. Maynard.
140 Notes on the Origin of the Presidency General Hospital, Calcutta. (Concluded.) D. M. Moir.

138. **Plague.**—Deane discusses at length how plague infection enters the human body, and combats the notion that it is exclusively through abrasions. He gives a considerable amount of evidence, and concludes that careful examination shows that a very small proportion of the natives display cuts or abrasions, no more than can be found in any large community. When abrasions are found on persons with plague there is an absence of any sign that would render it probable that they were the point of inoculation In a proportionately small proportion of cases skin lesions are observed, which, when appearing early in the course of the disease, seem to point to an entry for the virus, but the evidence is unsatisfactory and the lesions can be more satisfactorily accounted for by supposing them to be manifestations of the general blood infection. Plague, he holds, is contracted by inhalation of the virus. The different symptoms presented in different individuals depend on the individual constitutions, and they may be in part due to the quality and quantity of the virus observed. Infection through the respiratory organs is borne out by the course taken by the disease and its virulence in damp, dark places void of ventilation.

Journal of Tropical Medicine, London.

April 1.

141 *Tropical Hygiene. (To be continued.) W. J. Simpson.

141. **Tropical Hygiene.**—Simpson notices the different conditions in the tropics from those of the temperate and cooler climates, and remarks that one has to adapt himself to the circumstances. For instance, water-sealed closet traps that are considered advisable in cooler climates would be unadvisable in warmer countries, because they are sure to be unsealed by evaporation in summer and pressure through storms in the rainy season. He divides the tropics into the tropical and subtropical regions, including in the latter the region extending to 35 degrees latitude north and south and external to the tropics of Cancer and Capricorn. The irregularity of isotherms is remarked on and also the difference between insular and continental climates. Humidity has a powerful effect, and the distribution of the rains has much to do with the formation of the climate. Rain within the tropical zone is much more decided than in the temperate zone There are no drizzling rains, but the showers, whether short or long, are heavy. This favors, excepting in very porous soils, floods, inundations, and the formation of swamps, which require special attention to drainage for their prevention. The climate impresses itself strongly on the vegetation of the locality; where there is a great variety of plant life, luxuriant growth, the climate is sure to be hot and moist. When the vegetation is less luxuriant, but of the same tropical nature, the climate will be hot, but with plenty of rain, but where the heat is strong and the rain fails, vegetation fails also. Putrefaction and fermentation proceed with much more rapidity in warm climates, especially in hot and humid ones. What is harmful in Europe is doubly so in the tropical regions. As soon as the European enters the tropics he comes under the influence of a new environment, though the illnesses to which he is subject are not, as formerly considered, altogether the fault of the climate but are due largely to unsanitary habits, overfeeding,

intemperance, unsuitable clothing, etc When the food is good, the habitations healthy and the habits what they should be, the death rate is comparatively low. It is difficult to judge the proportion of ill health due to preventable causes, but, putting the individual under favorable hygiene, the mortality which used to be ascribed to the climate can be reduced 10 to 15 times its former rate in the West Indies, and at least five times its former rate in India. The question arises whether, apart from inattention to personal hygiene, insanitary conditions and malaria, residence in the tropics is more unhealthy to Europeans than residence in their own country. It is certain that in the vast majority of cases residence in the tropics for a short time does no harm.

New Patents.

Patents of interest to physicians, March 17 and 24:

722943. Hypodermic syringe case. Thomas A. Chappell, Brownwood, Ga.

722819. Syringe. Wm. M. Decker, Buffalo, N. Y.

722953. Rectal nozzle for syringes. Wm. M. Decker, Buffalo, N. Y.

722954. Vaginal nozzle for syringes. Wm. M. Decker, Buffalo, N. Y.

722976. Bath and fever machine. Frank W. Hall, Ingleside, Ga.

722841. Electrical massage apparatus. Wilbur F. Hedstrom, Los Angeles, Cal.

723042. Valve for syringes, atomizers, etc. Silas Schwerin, Belleville, N. J.

723070. Inhaler. Clarence W. Taylor, Sioux City, Iowa.

723355. Thermometer case. Albert Ashenberger, Elkins, W. Va.

723588. Hypodermic syringe. Fairleigh S. Dickinson, Baynne, N. J.

723456. Apparatus for treating the eye. Henry F. Garey, Balimore.

723268. Inhaler. Karl Greimer. Plauen, Germany.

723291. Strength testing device. John Maitland, Swampscott, Mass.

723735. Massage appliance. Torsten Schillberg, Glasgow, Scotland.

723738. Inhaler. August K. Schulte, Philadelphia, Pa.

723790. Endoscope or other optical instrument. Reinhold H. Wappler, New York City.

723797. Electric thermal therapeutic blanket. Wm. E. Williams, Springfield, Ohio.

Books Received.

Acknowledgment of all books received will be made in this colmn, and this will be deemed by us a full equivalent to those sendng them. A selection from these volumes will be made for review, s dictated by their merits, or in the interests of our readers.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. ssued Monthly. Under the General Editorial Charge of Gustavus . Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IV. Gynecology. Edited y Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School, and William Healy, A.B., M.D., nstructor in Gynecology, Northwestern University Medical School. March, 1903. Cloth. Pp. 242. Price, $1.25. Chicago: The Yearook Publishers.

DISEASES OF THE PANCREAS, DISEASES OF THE SUPRARENAL CAPULES, AND DISEASES OF THE LIVER. By Dr. L. Oser, of Vienna; Dr. E. Neusser of Vienna; and Drs. H. Quincke and G. Hoppe-eyler of Kiel. Edited, with Additions, by Frederick A. Packard, M.D., Late Physician to the Pennsylvania and to the Children's Hospitals, Philadelphia; and Reginald H. Fitz, M.D., Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston. Illustrated. Cloth. Pp. 918. Price, 5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 903.

THE CARE AND FEEDING OF CHILDREN. A Catechism for the Use f Mothers and Children's Nurses. By L. Emmett Holt, M.D., L.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), Third Edition, Revised nd Enlarged. Cloth. Pp. 149. Price, $0.75. New York and London: D. Appleton & Co. 1903.

HEARING ON THE BILL (H. R. 14788) TO ESTABLISH A LABORATORY OR THE STUDY OF THE CRIMINAL, PAUPER AND DEFECTIVE CLASSES, ith a Bibliography. By Arthur MacDonald, Specialist in the nited States Bureau of Education. Had before the Committee n the Judiciary. Paper. Pp. 309. Washington: Government rinting Office. 1902.

DISEASES OF THE STOMACH. By Dr. F. Riegel of Giessen. Edited, with Additions, by Charles G. Stockton, M.D., Professor of Medicine in the University of Buffalo. Illustrated, Including 6 ull-page Plates. Cloth. Pp. 835. Price, $5.00 net. Philadelhia, New York, London: W. B. Saunders & Co., 1903.

THE SURGERY OF THE HEAD. By Bayard Holmes, B.S., M.D., rofessor of Surgery in the University of Illinois. Cloth. Pp. 569. rice, $2.50. New York: D. Appleton & Co. 1903.

SIXTEENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF HE STATE OF OHIO For the Year Ending Oct. 31, 1901. Paper. p. 495. Columbus, Ohio: Fred J. Heer. 1902.

DIE PFLANZENPARASITARE URSACHE DES KREBSES UND DIE KREBSROPHYLAXE. Von Medizinalrat Dr. Robert Behla. Mut 4 Tafeln. aper. Pp. 48. Berlin: Verlag von Richard Schoetz. 1903.

FIFTH ANNUAL REPORT OF STATE HOSPITAL FOR CRIPPLED AND DEFORMED CHILDREN. In Charge of Board of Regents, University of Minnesota. Paper. Pp. 16.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., from March 27 to April 4, 1903:

Ashford, Bailey K., captain and asst.-surgeon, U. S. A., is relieved from further temporary duty at San Juan, P. R., and will proceed to Cayey, P. R., for duty.

Beal, Howard W., first lieut. and asst.-surgeon. The resignation of the above has been accepted, to take effect May 31, 1903.

Bacon, Alexander P., contract dental surgeon, will proceed to Vancouver barracks and report to the commanding general, Department of the Columbia, for assignment to temporary duty with the Seventeenth Infantry, and, on the completion thereof, will return to his proper station in the Department of Dakota.

Baker, David, first lieut. and asst.-surgeon, is granted leave of absence for four months from about May 1.

Chamberlain, Weston P., asst.-surgeon, will proceed to Cabana barracks, Havana, Cuba, for duty, to relieve First Lieut. John R. Devereaux.

Collins, George L., first lieut. and asst.-surgeon, will report at Fort Adams for duty on completion of course of instruction at the Army Medical School.

Devereaux, John R., asst.-surgeon, on being relieved from duty at Cabana barracks, Havana, Cuba, will proceed to Fort Columbus for duty, to relieve First Lieut. Eugene H. Hartnett, asst.-surgeon.

Devereux, Thomas, asst.-surgeon, is relieved from attendance at the Army Medical School, to take effect April 7, and will then proceed to San Francisco, Cal., for assignment to duty as surgeon on the transport *Sumner*.

De Loffre, Samuel M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School will proceed to Fort Assinniboine for duty.

Edio, Guy L., surgeon, is relieved from duty at Columbus barracks, to take effect on the arrival of Lieut. Truby at that post, and will then proceed to Monterey, Cal., for duty.

Ford, Clyde S., first lieut. and asst.-surgeon, is relieved from duty at Fort Wadsworth, and will proceed to Fort H. G. Wright for duty, to relieve First Lieut. Howard W. Beal, asst.-surgeon.

Frick, Euclid B., major and surgeon, will proceed to Fort Snelling for duty, to relieve Major Edgar A. Mearns, surgeon.

Gilchrist, Harry L., first lieut. and asst-surgeon, will, on the completion of the course of instruction at the Army Medical School, proceed to Fort Screven and report for duty.

Gosman, George H. R., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Du Chesne for duty.

Gregory, Junius C., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will report at the U. S. General Hospital, Washington barracks, for temporary duty.

Gapen, Nelson, first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to San Antonio, Texas, for assignment to duty to accompany the First Squadron, Twelfth Cavalry, to the Philippine Islands. On his arrival at Manila, Lieut. Gapen will report for assignment to duty.

Hartnett, Eugene H., first lieut. and asst.-surgeon, will proceed to Vancouver barracks, for duty in Alaska.

Hansell, Haywood S., first lieut. and asst.-surgeon, on the completion of the course of study at the Army Medical School, will proceed to Fort Monroe for duty.

Harris, Jesse R., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Myer for duty.

Hathaway, Levy M., asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Vancouver barracks for assignment to duty in Alaska.

Kirby-Smith, Reynold M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Barrancas for duty.

Lippitt, William F., major-surgeon, will proceed to San Juan, P. R., for duty, to relieve Major Euclid B. Frick, surgeon.

Mearns, Edgar A., major-surgeon, will proceed to San Francisco, Cal., for transportation to the Philippine Islands, where he will report for assignment to duty.

Lambert, Samuel E., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to St. Paul, Minn., for assignment to temporary duty at Fort Keogh, and to accompany the Second Squadron, Thirteenth Cavalry, to the Philippine Islands. On arrival at Manila, Lieut. Lambert will report for assignment to duty.

Newgarden, George J., asst.-surgeon, having completed the duty for which he was ordered to Washington, D. C., will proceed, not later than April 11, to Fort Mason, and turn over the public property for which he is responsible and, on the completion of this duty, will join his proper station at Fort Harrison.

Stockard, James K., contract surgeon, is relieved from duty at Fort Delaware, to take effect on the return to duty at that post of Contract Surgeon William J. Enders, and will then proceed to Fort Du Pont for duty, to relieve First Lieut. Samuel L. Steer.

Steer, Samuel L., first lieut. and asst.-surgeon, will proceed to Hot Springs, Ark., and report at the Army and Navy General Hospital for duty.

Smart, William M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Leavenworth for duty.

Stewart, William J. S., contract surgeon, on his relief from duty as surgeon on the transport *Logan*, will report for assignment to duty as surgeon on the transport *Dix*, to relieve Contract Surgeon H. Newton Kierulff.

Turnbull, Wilfred, first lieut. and asst.-surgeon, is relieved from duty at Fort Myer, and will proceed to Fort Monroe for duty, to relieve Major William F. Lippitt.

Truby, Willard F., first lieut. and asst.-surgeon, on his arrival in New York City, will proceed to Columbus barracks for temporary duty.

Talbott, Edward M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Clark for temporary duty, and to accompany the Second Squadron of the Twelfth Cavalry to the Philippine Islands. On his arrival at Manila, Lieut. Talbott will report for assignment to duty.

Scott, George H., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to San Antonio, Texas, for assignment to temporary duty at Fort Clark, and to accompany the Third Squadron, Twelfth Cavalry, to the Philippine Islands. On his arrival at Manila, Lieut. Scott will report for assignment to duty.

Pierson, Robert H., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will report at the U. S. General Hospital, Fort Bayard, for duty, to relieve First Lieut. Horace D. Bloombergh, asst.-surgeon.

Pyles, Will L., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will report at Washington barracks for temporary duty and to accompany the engineer troops to the Philippine Islands. On his arrival at Manila, Lieut. Pyles will report for assignment to duty.

Williams, Allie W., first lieut. and asst.-surgeon, is relieved from duty at Cayey, P. R., and will proceed to Fort Greble for duty, to relieve First Lieut. Weston P. Chamberlain, asst.-surgeon.

Winter, Francis A., captain and asst.-surgeon, will report on April 1 to Major A. La Garde, surgeon, president of the examining board, at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

The following named assistant surgeons will, on the completion of the course of instruction at the Army Medical School, proceed to San Francisco, Cal., for assignment to duty as surgeons on the transports designated after their respective names, to relieve the contract surgeons now on duty on those transports: First Lieuts. John W. Hamser, *Sheridan;* William T. Davis, *Logan;* Robert L. Carswell, *Kilpatrick;* Cary A. Snoddy, *Sherman;* William A. Powell, *Thomas.*

The following named assistant surgeons will, on the completion of the course of instruction at the Army Medical School, proceed to the posts designated after their respective names for duty: First Lieuts. Robert M. Blanchard, Fort Thomas; James Bourke, Fort Sheridan.

The following named asst.-surgeons will, on the completion of the course of instruction at the Army Medical School, proceed to Plattsburg barracks for temporary duty and to accompany the Twenty-Third Infantry to the Philippine Islands: First Lieuts. John A. Clark, Jacob M. Coffin and James D. Fife. On arrival at Manila Lieuts. Clark, Coffin and Fife will report to the commanding general, Division of the Philippines, for assignment to duty.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to San Antonio, Texas, and report for assignment to duty to accompany the Fourth Infantry to the Philippines, where they will report for assignment to duty: First Lieuts. William H. Moncrief, Charles F. Morse and Clarence H. Conner.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to Vancouver barracks, and report for assignment to duty to accompany the Seventeenth Infantry to the Philippine Islands, where they will report for assignment for duty: First Lieuts. Louis C. Duncan, Philip W. Huntingdon and Noel I. Barron.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to Denver, Colo., for assignment to duty to accompany the Fourteenth Cavalry to the Philippine Islands, where they will report for assignment to duty: First Lieuts. Samuel J. Morris and Harry S. Purnell.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to San Francisco, Cal., and report for transportation to the Philippine Islands, where they will report for assignment to duty: First Lieuts. Leon T. Le Wald, Alexander Murray, Edwin D. Kilbourne and Jay W. Grissinger.

The following named contract surgeons, on their relief from their present duties, will report to the commanding general, Department of California, for assignment to duty, or for orders to proceed to their respective homes for annulment of contract, if their services are not required: H. Newton Kierulff, John P. Kelly, Stephen Wythe, Homer C. Moses and Joseph J. Shafer.

The following named officers will report to Major Louis A. La Garde, surgeon, president of the examining board, at the Army Medical Museum Building, District of Columbia, for examination for promotion: First Lieuts. Weston P. Chamberlain, Edward R. Schreiner, Ira A. Shiner, Douglas F. Duval, Clarence J. Manly, David Baker, Albert E. Truby, Eugene H. Hartnett, Clyde S. Ford, asst.-surgeons.

Roberts, William, first lieut. and asst.-surgeon, is ordered to proceed to Hot Springs, Ark., and report at the Army and Navy General Hospital at that place, for treatment.

Robins, Robert P., contract surgeon, now casually at Fort Porter, from detached service, is assigned to temporary duty at that post until further orders.

Truby, Willard F., first lieut. and asst.-surgeon, is directed to proceed to Fort Ethan Allen for temporary duty, instead of to Columbus barracks, as directed in order of March 27.

Watson, Harry J., contract surgeon, is relieved from duty at the Presidio and assigned to duty as transport surgeon of the Army transport *Sumner.*

Winter, Francis A., captain and asst.-surgeon, in addition to his present duties, will report by letter to Major-General John C. Bates, commanding the Department of the Missouri, for such duty as may be assigned to him in connection with the assembling of troops at St. Louis, Mo.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ended April 11:

Surgeon C. Biddle, detached from the Navy Yard, League Island, Pa., and ordered to the *Minneapolis.*

Surgeon G. T. Smith, detached from the *Puritan* and ordered home to await orders.

Surgeon O. D. Norton, detached from the *Minneapolis* and ordered to the Navy Yard, League Island.

Asst.-Surgeon J. H. Halloway, detached from the Museum of Hygiene and ordered to the *Franklin.*

Asst.-Surgeon E. M. Brown, detached from the Museum of Hygiene and ordered to the Naval Hospital, Norfolk, Va.

Acting Asst.-Surgeon D. P. McCord, appointment revoked, to take effect April 4.

Surgeon E. S. Bogert, ordered to the Naval Academy, Annapolis.

Asst.-Surgeon T. M. Lippitt, retired, detached from the Naval Hospital, New York, and ordered home.

Asst.-Surgeon C. F. Ely, ordered to the Naval Hospital, New York.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 9, 1903:

Surgeon R. D. Murray, granted leave of absence for fourteen days from May 1.

Surgeon W. P. McIntosh, to proceed to Lumpkin, Ga., for special temporary duty.

Asst.-Surgeon C. C. Pierce, detailed to represent the service at the meeting of the Florida State Medical Association, to be held at St. Augustine, Fla., April 8 to 10.

Acting Asst.-Surgeon G. H. Altree, granted leave of absence for five days from April 8.

Acting Asst.-Surgeon J. C. Rodman, granted five days' leave of absence from April 8.

Acting Asst.-Surgeon W. S. Walkley, granted leave of absence for two days.

PROMOTION.

E. M. Holt, pharmacist of the third class, promoted to be pharmacist of the second class, effective March 2, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 11, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, March 28-April 4, 2 cases.

California: Fresno, March 1-31, 20 cases, 1 death; Los Angeles, March 21-28, 2 cases; Sacramento, March 21-28, 1 case; San Francisco, March 26-April 2, 5 cases; Stockton, March 1-31, 4 cases.

Colorado: Denver, March 14-28, 49 cases.

Florida: Jacksonville, March 28-April 4, 4 cases.

Illinois: Alton, March 28-April 4, 1 case; Belleville, March 28-April 4, 1 case; Galesburg, March 28-April 4, 2 cases; Kankakee, March 24-31, 1 case.

Indiana: Elwood, March 22-29, 13 cases; Indianapolis, March 28-April 4, 10 cases, 1 death; Kokomo, March 28-April 4, 1 case.

Iowa: Dubuque, March 28-April 4, 1 case.

Kansas: Wichita, March 28-April 4, 2 cases.

Kentucky: Lexington, March 28-April 4, 2 cases.

Louisiana: New Orleans, March 28-April 4, 3 cases, all imported.

Maryland: Baltimore, March 28-April 4, 1 case.

Massachusetts: Boston, March 28-April 4, 2 cases, 1 death; Holyoke, March 21-April 4, 2 cases.

Michigan: Ann Arbor, March 21-28, 1 case; Detroit, March 28-April 4, 15 cases; Grand Rapids, March 28-April 4, 10 cases; Port Huron, March 28-April 4, 2 cases.

Missouri: St. Joseph, March 28-April 4, 1 case; St. Louis, March 29-April 5, 7 cases.

Nebraska: Omaha, March 28-April 4, 7 cases.

New Hampshire: March 28-April 4, Manchester, 3 cases; Nashua, 2 cases.

New Jersey: Hudson County, March 29-April 5, 2 cases.

New York: Buffalo, March 31-April 6, 1 death; New York, March 28-April 4, 1 case.

Ohio: Cincinnati, March 27-April 3, 9 cases; Toledo, March 21-April 4, 6 cases.

Oregon: Portland, April 1, 1 case.

Pennsylvania: March 28-April 4, Erie, 3 cases, 1 death; Johnstown, 1 case; Norristown, 1 case; Pittsburg, 25 cases, 4 deaths.

South Carolina: Charleston, March 28-April 4, 7 cases.

SMALLPOX—INSULAR.

Philippines: Manila, Feb. 13-20, 1 case.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, Feb. 1-28, 9 deaths; Rio de Janeiro, Feb. 27-March 6, 8 deaths.

Colombia: Barranquilla, March 8-15, 2 deaths.

Great Britain: Birmingham, March 14-21, 12 cases, 3 deaths; Bradford, March 1-14, 6 cases; Liverpool, to March 21, 86 cases, 6 deaths; London, March 14-21, 2 cases; Manchester, March 14-21, 8 cases; Nottingham, March 14-21, 3 cases; Walker-on-Tyne, March 7-14, 1 case; Wallsend-on-Tyne, March 7-14, 1 case.

Italy: Palermo, March 7-14, 1 case.

Mexico: City of Mexico, March 15-22, 6 cases, 5 deaths.

Russia: March 7-14, Moscow, 3 cases, 1 death; St. Petersburg, 37 cases, 5 deaths; Warsaw, 4 deaths.

Straits Settlements: Singapore, March 7-14, 4 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, Feb. 27-March 6, 27 deaths.

Colombia: Cartagena, March 9-16, 1 death; Panama, March 19-26, 4 cases, 1 death.

Ecuador: Guayaquil, March 7-14, 17 deaths.

Mexico: Vera Cruz, March 21-28, 2 cases.

CHOLERA—INSULAR.

Philippine Islands: Provinces, Feb. 7-14, 570 cases, 270 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, Feb. 13-20, 2 deaths.

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Original Articles.

AN EXAMINATION INTO THE CLAIMS OF THE RED-LIGHT TREATMENT OF SMALLPOX.

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PHILADELPHIA.

In a small book on "Phototherapy," written by Dr. Niels R. Finsen of Copenhagen, in 1901, he says: "In July, 1893, I proposed a new treatment for smallpox, which consists in placing the patients in rooms from which the chemical rays of the solar spectrum are excluded by interposing red glass or thick red cloth. The result of this method of treatment is that the vesicles, as a rule, do not enter on the stage of suppuration, and that the patients get well with no scars at all, or at most with extremely slight scarring." These claims, if correct, would prove the method to be of inestimable value, not only in preventing the disfigurement occasioned by smallpox, but in saving life, for, as is well known, death in smallpox nearly always results from the variolous septicemia caused by the cutaneous suppuration.

The use of red light in the treatment of smallpox dates back many years, and Finsen's statement, "I proposed a new treatment," is misleading, although I presume unintentionally so, for later he admits that his studies were influenced by the observation of others who had treated smallpox by the exclusion of daylight. The red-light treatment of smallpox was first employed in the fourteenth century by John of Gaddesden, who, though court physician, is said to have been "a very sad knave." Gregory wrote in 1843, "What think you of a prince of royal blood of England (John, the son of Edward the Second) being treated for smallpox by being put into a bed surrounded with red hangings, covered with red blankets and a red counterpane, gargling his throat with mulberry wine and sucking the red juice of pomegranates? Yet this was the boasted prescription of John of Gaddesden, who took no small credit to himself for bringing his royal patient safely through the disease."

Black[1] in 1867 revived the question of the influence of light in smallpox and claimed that the complete exclusion of light even in unvaccinated cases of smallpox effectually prevented the pitting of the face.

A few years later, in 1871, Waters[2] declared that "if daylight is entirely excluded from the patient, there is no doubt the disease is less severe." Barlow[3] stated that a marked contrast resulted in the two sides of a patient's face, one-half of which had been covered with a colored gelatin to exclude the actinic rays of the sun, while the other half was left exposed.

FINSEN'S RED-LIGHT THEORY.

Finsen has further elaborated the red-light treatment of smallpox, although it is said that he has not, or at any rate had not at the time he promulgated the theory, seen a single case of smallpox. He explains the action of red light on the principle enunciated in the following query: "What is more natural than that the chemical rays should exert an injurious influence on a diseased skin, when we see such severe inflammation produced by their influence on the healthy skin?" It has been conclusively established that sunburn results not from exposure to solar heat, but from the action of the chemical rays of sunlight. The use of red panes of glass or red curtains in a room, as urged by Finsen, excludes the chemical rays. It is further stated that in smallpox "the face and the hands, the parts of the body exposed to light, are the seats of the deepest and most confluent scars."

OBJECTIONS TO THE FINSEN THEORY.

There are numerous facts which militate against the correctness of Finsen's view. While prolonged exposure to the direct solar rays, particularly in the hot months of the year, commonly induces inflammatory reaction, yet there is no evidence of such noxious influence by ordinary exposure to diffuse daylight.

Smallpox is essentially a cold weather disease, and the months in which it flourishes most are characterized by cloudy skies and the presence of but little direct sunlight. It is difficult to believe that ordinary exposure in the sick room to diffuse winter daylight could result in any irritative action on the skin. If the theory were correct, summer smallpox should be more severe than the winter type, for the actinic rays of the sun are stronger in the former season. If there is any difference in the character of winter and summer smallpox it is milder in the latter, for during this season the epidemic influence is usually absent.

The predilection of the smallpox eruption for the face and extremities is not because these parts are exposed to light, for it would be difficult to explain on this theory the copious involvement of the feet, which are often attacked as severely as the hands.

There is every reason to believe that the preferential election of the face and extremities is due to the greater vascularity of these parts. That this is true is evidenced by the oft-noted observation that increased vascularity of any portion of the cutaneous surface from the application of an irritant determines the development of lesions in such areas. Time and time again have we observed the use of a mustard plaster, tincture of iodin, kerosene, or the presence of abrasions or sunburn on the skin excite confluence of variolous lesions in the irritated or congested portion of integument. (See Figs. 1 and 2.) But it is here to be noted, and the fact has an important bearing on Finsen's theory, that if irritation of the skin takes place after the appearance of the variolous eruption, it does not increase the number of lesions nor otherwise unfavorably influence the eruption. The augmentation of the lesions only occurs when the skin is congested prior to the appearance of the exanthem. For example, the tincture of iodin applied to the skin before the eruption has appeared, by congesting the skin, attracts lesions to the area painted. We have convinced ourselves that no influence of this kind operates after the eruption is out for we have used iodin painted on the face in hundreds of cases.

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[1] Lancet, June 29, 1867.
[2] Lancet, Feb. 4, 1871.
[3] Lancet, July 1, 1871.

It appears reasonable, therefore, that the alleged benefit resulting from the exclusion of the actinic or chemical rays of sunlight is not explicable on the grounds maintained by Finsen, for, inasmuch as irritation of the skin after the appearance of the exanthem does not unfavorably influence the eruption, it can not be held that the prevention of sunlight irritation favorably modifies it.

Finsen expresses the view that many remedies which have been claimed to exert a favorable influence on the smallpox eruption have done so through their ability to exclude the solar rays. He says: "The tincture of iodin, which stains the skin yellow, protects it specially from the chemical rays. The solution of nitrate of silver also absorbs these rays and later stains the skin black, by which the rays are excluded."

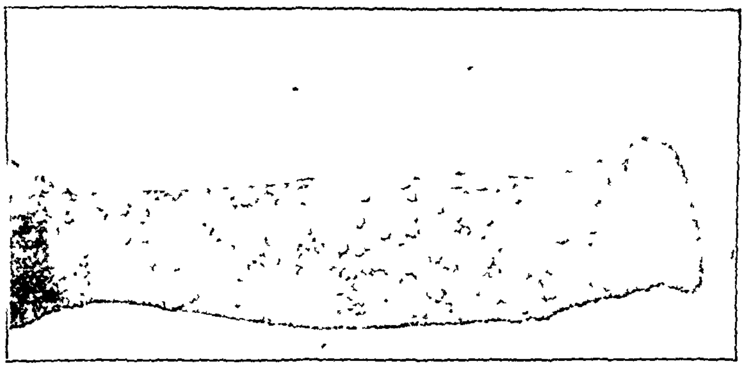

Fig. 1.—Confluence of variolous lesions caused by the application of iodin for a sprain *before* the appearance of the eruption.

If Finsen's theory concerning smallpox and light were correct the negro ought to suffer much less severely from the disease than his white neighbor; the black man has been given by nature the best possible protection against the injurious influence of the actinic rays of the sun. He has a protective layer of pigment in the epidermis which excludes the chemical rays. Does he suffer as severely from smallpox as the Caucasian? Most writers claim that smallpox is more severe in the negro than in the white race; in our experience, however, comparing the unvaccinated of both races, the mortality has been about the same. The absence of any freedom from pitting on the part of the negro strongly challenges the truth of the light theory. Finsen has admitted that "pigmentation constitutes a defense against the effects of the chemical rays," and has proved the truth of this assertion by the following experiment on himself.

"To imitate the color of the negro's skin, I traced in India ink on my forearm a band about two inches wide, and then exposed it for three hours to a very hot sun. I then removed the black color, and the skin under it appeared perfectly white and normal, while that on each side was red." Some hours later the contrast between the protected and the exposed portion was still greater as the latter became swollen and inflamed.

One more theoretical consideration. It does not appear plausible that the exclusion from the skin of the chemical solar rays (those rays which exert a bactericidal *influence*) would be advantageous in dealing with a disease in which there are thousands of small microbe-containing abscesses in the skin.

THE QUESTION OF PITTING IN SMALLPOX.

Pitting is due to destruction of the papillary layer of the true skin by the suppuration of the variolous pocks. The more deeply the skin is attacked the greater will be the scarring. The occurrence or prevention of scarring is less determined by any special method of treatment than by the vaccinal condition of the patient and the severity of the disease. The type of smallpox has been very considerably changed since the introduction of vaccination. Where this agent does not confer complete immunity against variolous infection, it is still quite sure to exercise a more or less marked modifying influence over the disease. Mild smallpox is nearly always characterized by superficially seated lesions. During 1902-03 there were treated at the Municipal Hospital of Philadelphia in the neighborhood of 2,300 cases of smallpox, of whom one-half were not vaccinated, the other half consisting of adults who had not been vaccinated since infancy. In the vast majority of instances the once-vaccinated cases suffered mild attacks and were not scarred. Indeed, at least 60 per cent. of the patients discharged had no indelible scars. The epidemic was mild compared with the severe epidemics of 1871 and 1881, the death rate being about 18 per cent. The most important treatment of smallpox for the prevention of scarring is the prophylactic treatment—vaccination; and yet mild smallpox in unvaccinated persons often runs its course and leaves no scars. This is particularly

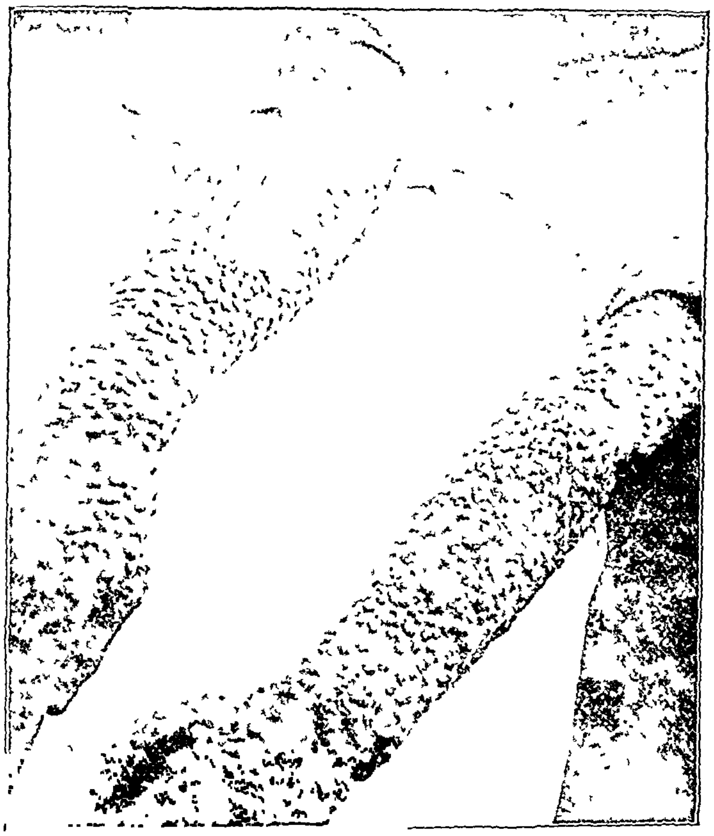

Fig. 2.—Confluence of variolous lesions on the forearms due to sunburn a week or so *before* the patient fell ill with smallpox.

true of children in whom the eruption is, as a rule, more superficially situated.

In determining the value of any remedy in the treatment of smallpox, conclusions should be drawn only from its employment in unvaccinated cases. Furthermore, the prevailing type of the epidemic should not be left out of consideration, for it is a well-known fact that a varying percentage of cases recovers in different epidemics. Certain therapeutic procedures employed during mild epidemics may be accorded an entirely undeserved commendation and value. If during the uniquely mild epidemic of smallpox that has been prevailing throughout the United States during the past few years, some special therapeutic agent had been advised and generally used, there would have appeared no more incontrovertible fact in the history of medicine than that this remedy was an invaluable specific in the treatment of smallpox. And yet the mildness of this widespread epidemic with a mortality rate among the vaccinated and unvaccinated of less than 2 per cent. was not influenced to any appreciable extent by any therapeutic measures. Such observations serve to point out the pitfalls into which the ultra-enthusiastic therapeutist may fall.

PRACTICAL RESULTS OF THE RED-LIGHT TREATMENT OF SMALLPOX.

The treatment of smallpox by the exclusion of the chemical rays of the sun has now been tried by a number of physicians, chiefly in Denmark, Sweden and Norway. Practically all of these men have been favorably impressed with the results.

Drs. Lindholm and Svendsen of Bergen, Norway, treated eight patients, four of whom were unvaccinated children. The latter physician says: "The period of suppuration, the most dangerous and most painful stage of smallpox, did not appear, there was no elevation of temperature and no edema. . . . . The hideous scars were avoided."

Professor Feilberg of Copenhagen employed the treatment in eleven patients. There was no secondary fever and in all the patients the vesicles (?) began to dry up from the ninth to the eleventh day. "In every instance the patient left the hospital with pigmented or hyperemic spots, but without loss of substance of the skin."

Dr. Strangaard of Denmark treated four cases of variola by this method, and stated that he had a "very clear impression that this treatment exercised a favorable influence on the disease."

Dr. Benckert of Gothenberg, Sweden, treated 16 cases of smallpox, 11 of variola vera and 5 of varioloid with red light. Three died, one from puerperal infection, one from hemorrhagic smallpox and one from the fever of suppuration. Dr. Benckert regarded the results in grave cases as surprisingly favorable; "suppuration is usually abolished; scars are extremely rare and the duration of the disease is shorter."

Dr. Mygind of Denmark employed red light in 22 cases of smallpox, of which 12 were variola vera and 10 varioloid. "All left the hospital (save one fatal case admitted late) without loss of substance, but several hyperemic spots."

Dr. Abel of Bergen, Norway, used red light in 23 cases of smallpox, 8 of which were "very severe." All the patients recovered; suppuration did not occur at all, except in one case admitted late. "Even in the patient admitted with full suppuration the favorable effect of the treatment was immediately visible. From the next day the fever diminished and the irritation of the pustules lessened."

As to scars, Dr. Abel thinks that he has not been so successful as other observers. A relatively great number of his patients presented superficial cutaneous changes, especially on the forehead and nose; the scars, however, did not in any way resemble those which are commonly observed. They looked rather as if they had been produced by scratching or some accidental cause.[4]

Dr. Backman treated "62 severe" cases at the fever hospital of Koliikomaki; of this number "three adults died, all of pneumonia, and four children" on the third, fifth and tenth day after admission. "Generally the suppurative period passed off quickly and easily, the vesicles dried up sooner than usual and left no scar at all."

This author has also employed this method of treatment in scarlet fever and measles and has "found the method active, the course of the disease becoming milder and shorter."

Finsen in summing up these cases says that out of a total of 140 to 150 cases of smallpox in one case only (that of Dr. Benckert) was the method inefficacious.

Juhel-Renoy of Paris has not obtained such favorable results as the above quoted physicians. He believes that suppuration and scarring are not prevented but lessened by this procedure.

PERSONAL EXPERIENCE WITH THE RED LIGHT.

During the winter of 1902 Dr. Wm. M. Welch, physician in charge of the Municipal Hospital, and myself fitted up a room for the red-light treatment of smallpox. We regret that we can not recite such results as are quoted above. Although our experience is limited to but two cases, the results were such as to destroy any confidence in this measure that we might have possessed. Our red room was complete in its appointments. The window panes were of a ruby red color, the gas jet at night was surrounded by a red globe, the walls of the room were painted deep red, and a red curtain covered the inner of two doors so as to completely exclude the light of day. Two unvaccinated young men (one 16 years of age and the other 20), who started with profuse eruptions, were placed in this room about the third day of the eruption, before the lesions had become frankly vesicular. The course which the disease pursued in both cases was in no wise different from that seen in patients treated in the regular wards. The pustules filled up and became confluent, the secondary fever was high and protracted, and the patients markedly delirious. One of the young men, who was a private case and had a special nurse day and night with every possible attention, succumbed to the disease. The other recovered, but with most disfiguring scars. Owing to the discouraging results obtained in these two cases, and to the fact that the location of the red-light room made the nursing inconvenient, this method of treatment was abandoned.

It will be urged, and with apparent justice, that an experience with two cases should not be cited to offset the results of treatment in 150 cases. It must be remembered, however, that the red-light method failed absolutely to exercise any modifying influence on the disease in these two cases under appropriate conditions. In the 150 patients, nearly all of whom did well, other factors may be accountable for the good showing. What some physicians regard as severe smallpox, others look on as cases of average or moderate severity. Photograph 3 represents a patient treated at the Municipal Hospital in 1899. Many physicians would regard such a case as one of great severity; yet the eruption was superficially situated, the patient was never dangerously ill, and, indeed, made a good recovery without any permanent pitting.

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[4] Quoted from Finsen, Phototherapy, p. 32.

Several photographs of patients treated with red light, who recovered with no scarring or only insignificant scars, published in Finsen's book, represent what we in this country would regard as mild and favorable cases, the eruption being on the skin rather than in it.

It must be remembered that Denmark, Sweden and Norway are, with the exception of Germany, the best vaccinated countries of Europe. It is illogical and misleading to definitely attribute favorable results to certain measures employed in the treatment of smallpox in persons once vaccinated. The vast majority of such patients recover without scarring under any treatment and even without any treatment. Again, in the absence of severe epidemics, and there have been no severe epidemics in the past decade, young children with variola (who are, of course, unvaccinated) usually escape without permanent scarring.

The character of the prevailing form of smallpox, whether mild or severe, is a matter of great importance in determining both mortality and disfigurement. During the year ending June 30, 1902, there were in the United States 55,857 cases of smallpox with 1,852 deaths (a mortality rate of 3.31 per cent.), and in the year previous 38,506 cases and 689 deaths (a mortality rate of 1.79 per cent.). What would the verdict have been if red light had been used in these cases?

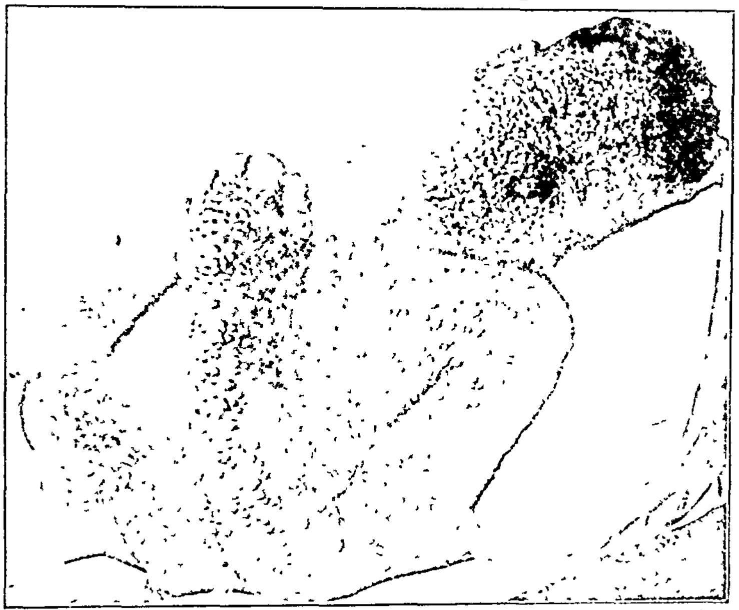

Fig. 3.—Example of a case of smallpox with a semi-confluent but superficial eruption in an unvaccinated mulatto, which was not followed by any permanent scarring.

In the February (1903) number of a popular monthly magazine there appeared several articles on "Niels Finsen and His Healing Rays." Among other unwarranted statements concerning the red-light treatment of smallpox appeared the following: "All the world might now have smallpox without fear of disfigurement."

No one would for a moment endeavor to detract from the hard-earned and well-deserved reputation of Finsen, but in the interests of truth such statements as that just quoted should be challenged.

Automobile Conjunctivitis.—Ophthalmologists report many cases of conjunctivitis caused by rapid riding in automobiles without any protection to the eyes. Davis, in the *Postgraduate*, says it is traumatic, due to friction of the wind and chilling of the eyeball. The treatment is to remove the cause, apply 15 minute cold compresses thrice daily and mild astringent washes by an eye cup twice daily.

THREE ESSENTIAL POINTS IN THE OPERATION FOR CICATRICIAL ECTROPIUM.

F. C. HOTZ, M.D.
Professor of Ophthalmology and Otology in Rush Medical College.
CHICAGO.

Some one once said that blepharoplastic operations look very pretty—on paper—but in reality the results are anything but pleasing and satisfactory. The operations for cicatricial ectropium are not excepted from this criticism. The restored lids often look hideous, and still oftener are again everted after a few weeks or months. But we can overcome these drawbacks if we pay strict attention to the following points:

1. The proper division and fixation of the skin flaps.
2. The selection of the most suitable material for covering the lids.
3. The shortening of the overstretched lid border.

THE PROPER DIVISION AND FIXATION OF THE SKIN FLAPS.

The greatest difficulty we have to contend with in the operations for cicatricial ectropium is the tendency of the shrinking skin flaps to evert the lids again. As all transplanted flaps will undergo more or less shrinkage and as the lid border is least capable of offering any resistance to the traction of the shrinking flap, a re-eversion of some degree is almost inevitable as long as the transplanted flap is attached to the non-resisting lid border on the one side and to the non-yielding skin of the forehead or cheek on the other side, because the lid border is then exposed to the full traction force of the shrinking flap. It is evidently much easier for this flap to pull the lower lid down than to draw the skin of the cheek up, and therefore re-eversion is an especially common occurrence after the operation for ectropium of the lower lid.

It is plain, then, that to prevent the reoccurrence of ectropium we must place the lid border beyond the reach of this traction force. And this can be accomplished if instead of covering the whole wound with one skin flap we make use of two flaps, a small one, which is to cover the lid surface only and which we will call the lid flap, and a large one, which is to be spread over the remaining wound area; and furthermore, if we make provision that the contraction of the larger flap can have no effect on the lid flap.

In ectropium of the upper lid this point is gained if the upper edge of the lid flap (Fig. 1 ba) is firmly attached to the upper border *a* of the tarsus, while its lower edge *b* is united with the free margin. The lid flap is thus anchored above and below to the tarsus and its contraction can not turn the lid over because to do so the traction force must have a fixed point of purchase outside of the lid. The shrinkage of the other skin flap *ac*, which has its point of purchase *c* outside of the lid, however, can not disturb the position of the lid margin, because its pulling force is expended entirely on the upper tarsal border *a*; for, thanks to its firm union with this border, the lid flap can not be stretched or drawn upward by the contraction of the other flap, and as long as the lid flap can not be drawn up the lid border is effectually guarded against re-eversion.

In ectropium of the lower lid, the same principle is adopted for the protection of the lid against the vicious traction of the shrinking skin flap. But we must bear in mind that the tarsus of the lower lid is very small and narrow and that normally the lid skin reaches farther down than the lower border of the tarsus, to a slight furrow a little above the infraorbital margin (Arlt's tarso-malar furrow) where the integument passes from the upright plane of the lid into the sloping surface of the cheek. This normal boundary line between the lower lid and cheek must be re-established by our division and fixation of the skin flaps; and the lid flap *dg,* therefore, must not be united with the lower border of the tarsus, but fastened to the tarso-orbital fascia (at *g*) in a line a little above the infraorbital margin. As the fascia is, as it were, the anatomical continuation of the tarsus, the lid flap adherent to the surface of the tarsus and fastened to the fascia can not evert the lid. And the shrinkage of the large flap *ge* covering the wound of the cheek, is prevented from pulling on the lid margin and causing re-eversion of the lid, because its traction can not reach beyond the firm union of the lid flap with the fascia. So strong is the resistance of this union that you may draw the skin of the cheek down as much as you please and you will not succeed in everting the lid.

THE SELECTION OF THE MOST SUITABLE MATERIAL FOR SKIN FLAPS.

If it is our ambition to obtain the best possible results in ectropium operations—and nothing less ought to satisfy us—we can not be contented with the mere reposition of the lids, but should strive also to restore as much as possible their natural appearance. The lids contribute more to the expression of the eye than the eyeball itself; and the slightest alteration of shape and outline, or the least impediment of motion seriously mars the expression of the face. This is a very important point and should always be taken into account when we choose the material for our flaps. The normal integument of the lids is a thin and delicate skin of such perfect flexibility and adaptability that it allows perfect freedom of motion and accommodates itself readily to the numerous slight changes in contour so characteristic for the various facial expressions. In order, therefore, to gain a perfect cosmetic result we must select as a substitute for the lost lid skin a material which possesses the same qualities; it must be thin, light and adaptable.

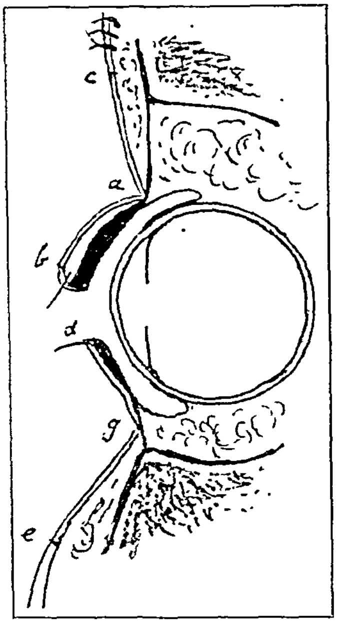

Figure 1.

It goes without saying that the thick skin of the forehead, temples or cheek does not possess these qualities, and therefore flaps from these regions should not be transplanted on the lids. Besides the transplantation inflicts additional wounds on the face, and I hold we should avoid marring the face by unnecessary scars. The use of Wolfe's flaps taken from the arm avoids this latter objection, but they, too, are usually so thick that, like the pedunculated flaps, they make a heavy, clumsy-looking lid. These two kinds of flaps are as well suited for a substitute of lid skin as shoe leather would be for kid gloves.

A good and suitable material for lid flaps which answers all the requirements is the cicatricial skin usually found in the immediate vicinity of extensive ectropium. I have shown in 1896[1] that this skin can be successfully transplanted and makes a perfect lid skin. In ectropium of the lower lid this cicatricial skin can nearly always be utilized for the lid flap. In ectropium of the upper lid it can sometimes be used when the eyebrows are absent. If on account of the eyebrows the cicatricial skin is not available, a Thiersch graft is the only suitable material. It accommodates itself to the surface of the lid, brings out its contours perfectly and does not in the least interfere with the free movements of the lid.

THE SHORTENING OF THE ELONGATED BORDER OF THE LOWER LID.

As the diameter is shorter than the half circle, so in the case of complete ectropium the free lid margin of the lower lid turned from its almost straight line between the canthi into a long downward curve is elongated a good deal; and after being held in this abnormal state for a long while it will not recover its normal length when the lid is replaced. The elongated margin of the lower lid will not closely fit the curvature of the eyeball and will drop away from it, as in senile ectropium. The reposition of the everted lower lid, therefore, can not be perfect and permanent, unless the overstretched lid margin is reduced to its proper length. In several instances I did not do that, because the lid margin appeared to lie in perfect apposition to the globe; but every time I had cause to regret this omission, and had to correct my mistake by a second operation. I therefore regard the shortening of the elongated border of the lower lid a very essential point in the operation for cicatricial ectropium.

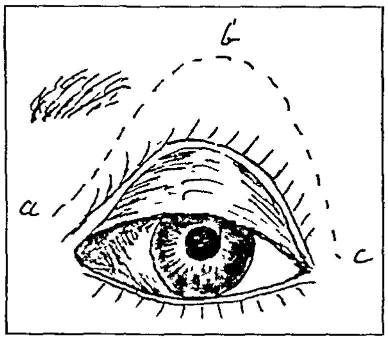

Figure 2.

And now, after having so strongly emphasized the importance of these several points, I wish to indicate briefly the plan of operation based on the views expressed in the foregoing remarks. As the operation is not alike in details for both lids, I believe it is better for a clear understanding to describe the method for each lid separately.

TECHNIC OF THE OPERATION ON THE UPPER LID.

If the eyebrows are partly absent and there is a good expanse of cicatricial skin above the everted lid, we cut from this cicatricial skin the lid flap in the following manner:[2]

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[1] THE JOURNAL A. M. A., Sept. 19, 1896; and Archives of Ophthalm., vol. xxv, No. 3.

[2] Archives of Ophthalm., vol. xxv.

"From a point (a Fig. 2) about 5 millimeters above the inner canthus an incision is made obliquely upwards into the cicatricial skin and then *continued* in a curve downwards to a point c about 5 millimeters from the external canthus. This incision outlines a large flap *abc* which is carefully dissected up from the underlying scar tissue as far as the lid borders. The lid is then released by dissection from all cicatricial connections until it can be easily turned down into its normal position; and now the edge (Fig. 3 *ac*) of the lid flap is fastened by silk sutures to the upper border of the tarsus."

If, however, on account of the eyebrows the lid flap can not be taken from the cicatricial skin, we make an incision along the lid border and after the reposition of the lid cut from the arm a Thiersch graft of suitable size, which is transported on the razor directly to the lid, spread out over its surface and fastened by fine silk sutures to the upper tarsal border as well as to the wound edge of the free border. These sutures must be inserted with great care to make sure the edges of the flap do not roll in; their application therefore is very tedious work; but the time is well spent, because the graft thus fixed is positively secured against being shifted from its place by any movement of the lid or by any accidental displacement of the dressings.

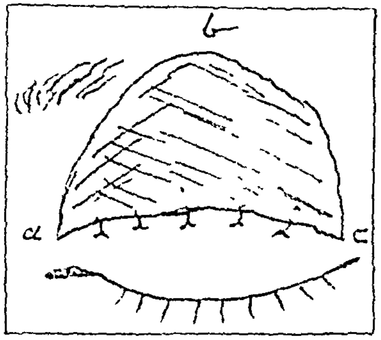

Figure 3.

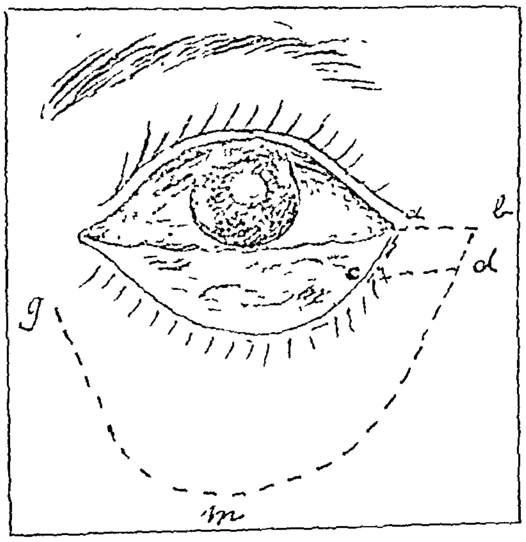

Figure 4.

After the lid flap is fastened (as in Fig. 3) the lid is drawn down as far as possible and held in this position by two ligatures passed through the free border and fixed on the cheek by plaster strips. This is done for the purpose of immobilizing the lid during the healing process and also for enlarging the wound (abc) above the lid to its fullest capacity. Over this wound a Thiersch graft is spread out so that its edges lap over the surrounding skin; no sutures are used.

TECHNIC OF THE OPERATION ON THE LOWER LID.

Here the lid flap can always be procured from the cicatricial skin; but as this skin shrinks considerably as soon as it is dissected up we must take good care to cut the flap of very liberal dimensions. We begin the incision one centimeter below the inner canthus (Fig. 4 *g*), carry it obliquely down into the cheek to a point *m* 2 to 3 centimeters below the center of the everted lid margin; then we continue it *in an oblique direction* upwards and outwards to a point *b* even with and one centimeter from the outer canthus. This large flap *gmb* is then dissected up from the underlying scar tissue and all cicatricial strands and bands are cut until the lid is freed and can be turned up.

The next step is to reduce the overstretched lid margin to its proper length by removing a suitable piece of the lid (except the conjunctiva) near the outer canthus by the following incisions (Fig. 4): from the canthus *a* transversely to *b*; from *a* to *c* along the lid margin, and from *c* to *d* through the flap; the edges *cd* and *ab* are then united by two silk sutures. Now the lid is drawn up as far as possible and held in this position by two silk ligatures passed through the free margin and fastened on the forehead by adhesive plaster or collodion. This done the edge of the lid flap is anchored to the tarso-orbital fascia by silk sutures (Fig. 5). The lid flap should be evenly spread out, so as to be in *perfect* contact with the wound surface; but we must carefully avoid any undue stretching; and should we find that the flap is a trifle short and would be stretched if the sutures are placed very near the infra-orbital margin, it is better to put them through the fascia 1 or 2 millimeters higher up. Finally, the wound surface *gmb* below is covered with a Thiersch graft, the edges of which are made to lap over the surrounding skin. No sutures.

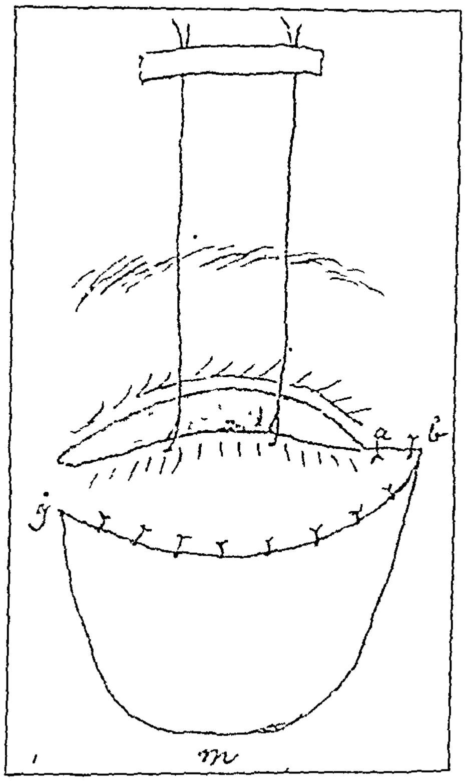

Figure 5.

AFTER TREATMENT.

The after treatment is the same for the upper and lower lid. Strips of gutta percha protective are laid over the flaps, and on these strips a gauze compress wrung out of warm boric acid solution; this is covered by a large square piece of protective to prevent evaporation and over this is put a layer of cotton to maintain uniform warmth. This whole dressing is secured in place by a roller bandage and best left undisturbed for three days. Then it is carefully removed; the flaps are thoroughly cleansed, the overlapping edges of the large flap are trimmed off and a new dressing is put on which is changed every day or two, as circumstances may require. At the end of the first week the ligatures and the sutures of the lid flap may be removed; during the second week some simple ointment (like borated vaseline) is applied daily on the flaps, and after this period no further treatment is required.

THE OBJECTIONS TO PRESCRIBING MEDICINES OF UNKNOWN COMPOSITION.

AUGUSTUS A. ESHNER, M.D.

PHILADELPHIA.

If the proposition contained in the foregoing terms were always presented so clearly and so directly there would be little room for discussion, as I think it will be generally conceded that the fact of the composition of a medicine being unknown would constitute in itself the most serious objection to its prescription by physicians. Nevertheless, I fear that many prescriptions are written daily for preparations concerning whose composition the prescriber is not in possession of such fulness of knowledge as is requisite for the most intelligent and most successful employment of the articles of the materia medica.

The modern manufacturing pharmacist has exhibited marked skill and ingenuity, worthy of a better cause, in concealing ignorance behind the mask of false knowledge. It has become the vogue for this enterprising individual, firm or corporation, to put forth products to which he gives fanciful names, for which he claims elaborately described marvelous effects, and of which he states the composition in accordance with his own views and purposes. He has a predilection for describing his product as a synthetic preparation with a formula comprising C,H,N, and O in startling proportions, and he gives it an almost interminable and unpronounceable chemical name, but is good enough to coin a descriptive and copyrighted substitute. Sometimes it is, at other times it is not, a coal-tar product, according to personal caprice. If the preparation be a mixture, only its constitutents may be named, and sometimes not all of these, the proportions being omitted. In these and devious other ways a pretence of publicity is made, by which the careless and indifferent may be readily if not willingly deceived. Samples are distributed generously to physicians, who read with avidity the accompanying so-called literature skilfully devised by the manufacturer, and it is not long before testimonials indorsing the new preparation are forthcoming, and clinical reports of cases treated with the new preparation appear in certain medical journals. Sometimes the aid of the physician is further invoked by securing him as a stockholder or officer in the manufacturing concern, and his interests may be further looked after in the way of commissions or concessions in return for prescribing the remedy. The preparation is now launched on a career of success and prosperity, which may be of longer or shorter duration in accordance with a variety of conditions. Mayhap when the profession has done all in its power to contribute to this end, direct appeals to the laity, supported by the indorsement of "the medical faculty," are made to the public through the advertising columns of the newspapers and the dead walls and spaces of the city and the country.

The practice of medicine, though art, is based on scientific principles, and it will be successful in proportion to the fulness and precision of the knowledge underlying it. If the identity of a medicine is not known through its composition the prescriber has no assurance that he will always receive the same article, but, on the contrary, there is good reason for believing that he will get something different, in quantity or in quality, at different times. In this way he is liable to do discredit to his art, and injury, positive or negative, to his patient. Additionally, injustice is done the patient in that he is compelled to pay a higher price for medicines of concealed or suppressed composition than he would if these were prescribed in the regular way. The practitioner who permits himself to fall into the habit of prescribing ready-made preparations surrenders thereby originality and independence in his therapeutics, and fails to make progress in his art. The manufacture and the use of secret preparations have also a blighting effect on legitimate pharmacy. Finally, after all has been said on both sides of the question, if there are two sides, there remains the practical argument that the prescription of medicines of unknown composition is unnecessary, as all that can be accomplished with them, barring the potent influence of secrecy, can be brought about as well if not better by means of medicines of known composition.

From the foregoing considerations it must be clear that the prescription of medicines of unknown or concealed composition is unscientific, unprofessional, unfair if not prejudicial to the sick, unprogressive and unstimulating and, most of all, unnecessary.

The remedy for the existing state of affairs is in the hands of the medical profession. The manufacturing pharmacists will not make preparations that they can not sell, and if physicians will not permit the creation of an artificial demand for illegitimate preparations, and will cease to prescribe them, the manufacturers will soon discontinue their production. To this end it is the duty of all medical men having the interests of their profession and their patients at heart to confine themselves to the employment only of such drugs or combinations of drugs whose composition is of public knowledge, and further, is vouched for by some recognized authority, official or otherwise, such as the Pharmacopeia, the Dispensatory and the Formulary; or, in lieu of such indorsement, in the intervals between successive revisions, is given authentic publicity by investigators of acknowledged standing and competency through legitimate and recognized channels, such as the professional journals and independent publications. Above all things, the so-called literature of the manufacturing pharmacist and the reprints of articles from publications of questionable character should be viewed with suspicion.

Habits.—A cheerful habit of mind is like a fountain of youth to the body. Worry kills as surely as does arsenic, but steady, moderate work is a prophylactic against many of the ills to which flesh is heir. The greatest brain workers have generally been long-lived (as witness Gladstone and Bismarck), provided that they did not neglect the laws of hygiene and the natural demands of the body. The physician's irregular hours for eating and sleeping tend to disorder his faculties, depress his vitality and tempt to the use of drugs whose fatal allurements he knows best of [illegible]—*Denver Medical Times.*

A NEW METHOD OF SHORTENING THE ROUND LIGAMENTS INTRAPERITONEALLY FOR RETROVERSION.

HENRY T. BYFORD, M.D.
CHICAGO.

A new era in the treatment of retroversion of the uterus began with the introduction of Alexander's operation. Women had been until then worried with pessaries to hold the uterus in place, and with douches to keep the pessaries clean, yet without being cured.

Abdominal suspension has occupied the attention of the profession considerably in the meantime, but it has not proven a satisfactory remedy, and is being used less than formerly.

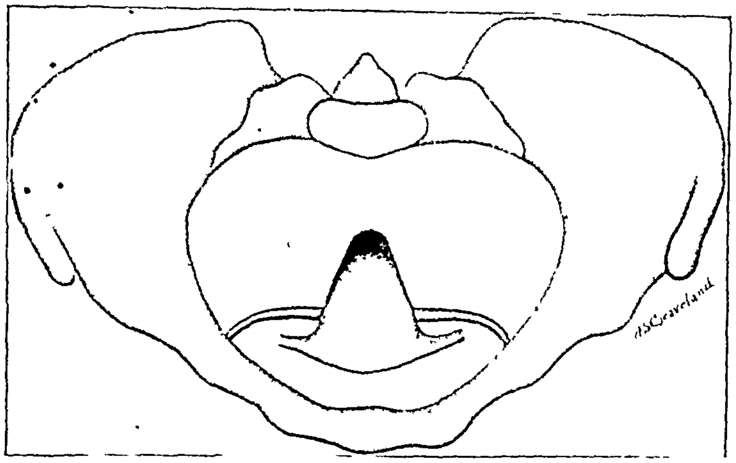

Fig. 1.—Approximately normal round ligaments

Intraperitoneal shortening of the round ligaments has become an acceptable substitute in cases in which it is found necessary or advisable to open the peritoneal cavity, for in such cases the ligaments are accessible without making the additional inguinal incision, and thus with less trauma.

W. Gill Wylie made a backward fold or loop in the ligament and sewed together the edges of the fold, and thus obtained a fair degree of success in holding the uterus in place. A. Palmer Dudley folds the ligament anteriorly and sutures the end of the loop to the anterior surface of the uterus. M. D. Mann folds the ligament somewhat in the shape of a capital letter N and stitches the edges together, thus securing an extensive adhesion of folded ligament. Other methods have been devised, such as A. H. Ferguson's, George H. Noble's, etc., which I have no time to describe.

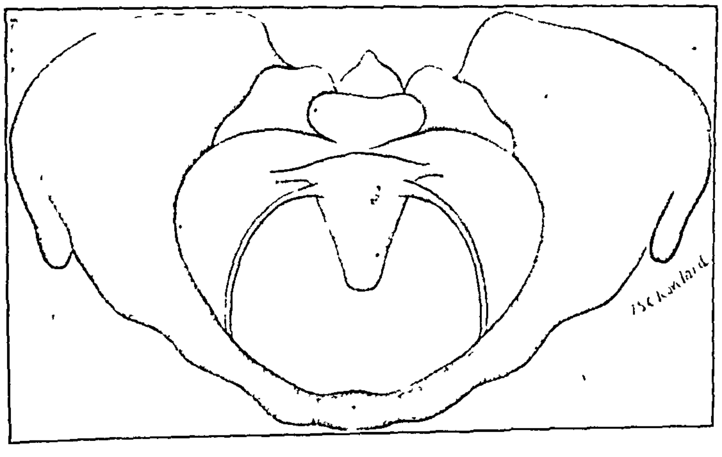

Fig. 2.—Relaxed round ligaments.

I wish, however, at the risk of still farther complicating an already complicated subject, to add another method or, rather, a modification of those already practiced.

It consists in folding the ligaments anteriorly (Figs. 3 and 4), according to Dudley, but in stitching the loop to the abdominal parietes about opposite or behind, and a trifle above, the internal inguinal ring (Figs. 5 and 6).

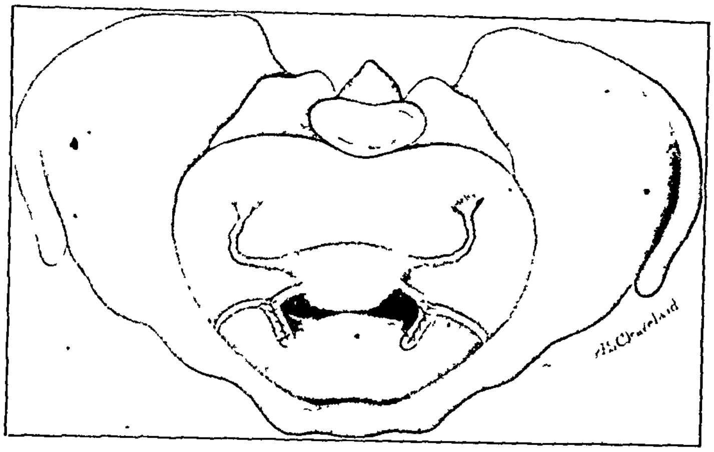

Fig. 3.—Fold taken in ligaments.

The ligament is grasped with hemostatic forceps and pulled out of the abdominal incision until it is drawn as far out of the inguinal ring as possible without doing violence to the tissues. Then a medium-sized catgut suture is passed through the center of the ligament about a quarter of an inch from the uterine end, and the same suture is passed through the ligament about half an inch from the internal inguinal ring. The suture is then drawn tight and tied like an ordinary ligature, except that it, of course, includes only half of the ligament in its grasp. The inner edges of the loop thus formed should now be touched with a chemical irritant, such as Monsel's solution or 1 to 5000 mercuric bichlorid, in order to destroy the endothelium and secure firm adhesions. The irritant is then wiped off and

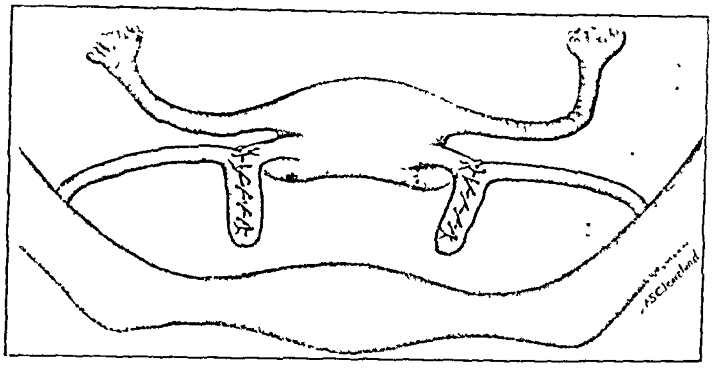

Fig. 4.—Same as Fig. 3.

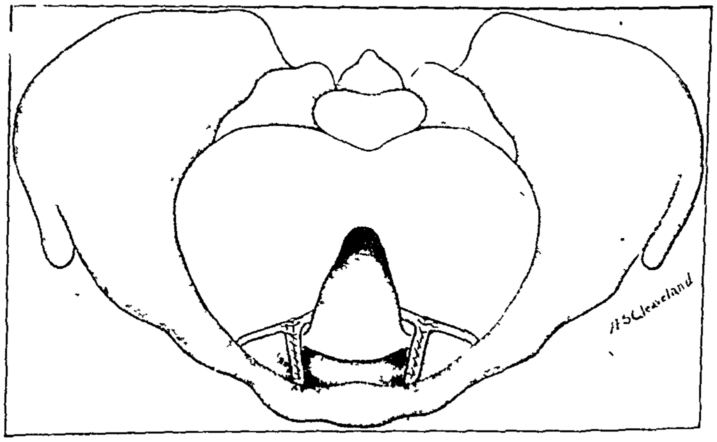

Fig. 5.—Fold of ligament sutured forward.

the edges sewed together by fine catgut that entirely closes in and covers up the irritated peritoneal surfaces.

The end of this fold is then touched with the chemical irritant and stitched forward beside the bladder about opposite and a little above the level of the external inguinal ring. This, of course, will be only a peritoneal attachment and should be rather high, because the peritoneum is held in place here rather loosely.

Thus we practically have two round ligaments on either side, one going from the uterus partly through the first catgut ligature to the attachment behind the external inguinal ring, and the other from the uterus to the ligature and from there to the internal inguinal ring, etc.

The uterine half or quarter inch, or inch, according to the place where we transfix the ligament, is common to both of the newly formed round ligaments.

When there is a tendency to uterine prolapse, I suture the whole side of the fold of the ligament to the peritoneum beside the bladder, or even suture the portions of the round ligaments external to the folds to the parietal peritoneum in front.

When there is decided prolapse. I also stitch the infundibulo-pelvic ligament forward, the fundus uteri itself, and even take folds in the sacro-uterine ligaments.

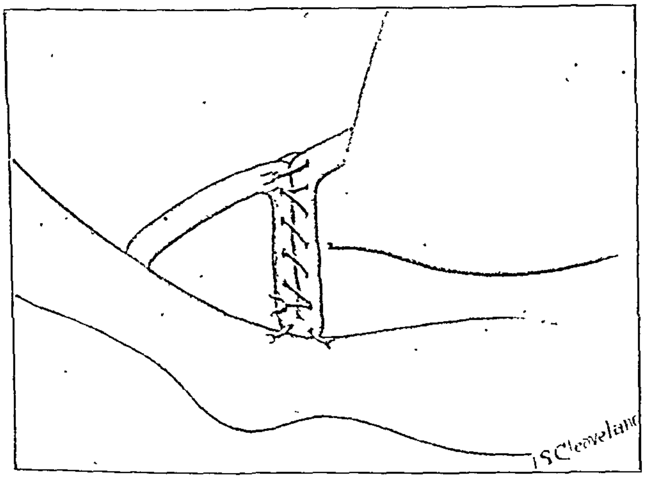

Fig. 6.—Same as Fig 5, showing one ligament.

When there is cystocele, I separate the remains of the urachus with a narrow strip of peritoneum, and after loosely twisting the flap thus obtained and drawing up the bladder, attach the flap into the abdominal wound. A complete description of this method was given in my paper on "Prolapse and Procidentia of the Uterus." read before the Third Pan-American Medical Congress in Havana, February, 1901.

Ferguson's method of shortening the round ligaments is, properly speaking, a prolapse operation. In it he has solved the problem of making the round ligament support a prolapsed uterus, and thus has improved on Nature's methods. Whether his results, which are good, will be permanent or not is for the future to decide. Ferguson makes a new channel for the round ligaments through the abdominal parietes higher up and nearer the median line than Nature has made, and draws the ligaments very taut. The movements of the uterus are more limited, but it is held up more firmly.

THE DIFFERENCE.—The young physician is most likely to err through his anxiety to "do something"; the older one because he has got into a rut.—*Med. Standard.*

THE MEANING AND SIGNIFICANCE OF LEUCOCYTOSIS.*

ROBERT N. WILLSON, M.D.
PHILADELPHIA.

This subject was first considered by the writer a number of years ago, when cases were noticed that failed to fulfill the requirements of the accepted definition of the term leucocytosis. Certain cases, and indeed the great majority, showed under well-known conditions a decided increase in the number of all the forms of leucocytes in the blood.

For a long time it had been believed that the polymorphonuclear forms were, in such cases, always in excess, and in 1897 Cabot accordingly formulated a definition of the term leucocytosis that has until recently served as the standard of teaching throughout the United States, at least. His definition was as follows: "An increase in the number of leucocytes in the peripheral blood over the number normal in the individual case, this increase never involving a diminution in the polymorphonuclear varieties, but generally a marked absolute and relative gain over the number previously present."

The experience of the writer has gradually led him, not only to question the accuracy of the above definition, but to call attention to certain forms of leucocytosis that have been noted by himself and other observers, but of which little has been written or said up to the present time. Actual cases seem to show that in at least two important respects Cabot's definition of 1897 is in error, viz.:

1. Leucocytosis should not necessarily imply an increase in the total number of leucocytes, even in the presence of an active inflammatory influence. The total number of leucocytes may be normal, or below normal in the individual, and a significant leucocytosis still be present, if there is a relatively high percentage of the polymorphonuclear cells. Such an increase implies that the same processes are at work as are suggested by a numerical increase in the total number of cells, and is of even greater import.
2. Notwithstanding the presence of inflammatory causes in the body, exerting influences that are sufficient to produce an absolute increase in the number of leucocytes, the percentage of polymorphonuclear forms may not only not be increased, but even diminished in the individual case, owing to other and more potent specific influences.

In discussing these forms of leucocytosis the terms relative and absolute will be used because they are now generally understood, and also because they have been employed in a similar sense in previous papers by the writer. By relative leucocytosis will be understood all forms of leucocytosis in which the polymorphonuclear forms are in marked excess of the normal percentage (70 to 75 per cent.). By absolute leucocytosis we will imply an increase in the total number of leucocytes in the individual case, irrespective of the percentages of the various forms.

RELATIVE LEUCOCYTOSIS.

This subject has been briefly referred to by the writer in several papers published during the past two years. Its apparent importance has grown with each new case in which it has been noted, until the conclusion seems warranted that not only do many cases occur in which a decided increase in the polymorphonuclear forms is evident in the absence of an increase in the total number of leucocytes, but that such a decided increase in the polymorphonuclear forms under these circumstances suggests either the presence of pus, or some other active inflammatory condition in addition to a grave loss of power in the natural resisting forces of the body.

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* Read at a meeting of t[illegible] County [illegible] Society, Nov. 26, 1902.

Many clinicians have noted cases in which an absolute leucocytosis has been present and gradually fallen as the energy of the body gave way. Some have even gone so far as to make an occasional observation on such an occurrence. In the same chapter as has already been quoted Cabot says: "In some cases in which the absolute number of leucocytes is not increased we see a relative increase in the adult cells, pointing to the fact that influences are at work similar to those which produce an absolute increase."

Many others, before and since the foregoing was written, and among them Thayer at Johns Hopkins Hospital, have cited occasional cases in which the same theory has been demonstrated as true. Nearly every one has regarded these cases, however, as rare exceptions to the ordinary, and the necessity for being on the watch for a relative leucocytosis as a needless precaution. No one except the writer, up to the time of a recent and unfortunately personal discussion of the value of blood examinations in general, seems to have found the routine examination of the relative percentages of the leucocytes in ordinary conditions either of particular interest or worthy of their attention. At that time he endeavored to show that the blood was not thoroughly examined in any case until a differential count of the leucocytes had been made; and several cases were cited to demonstrate the value of the discovery of a relative leucocytosis of marked proportions. Since the publication of these articles it has been a source of pleasure to learn that in many different directions a renewed interest has been excited in the percentage of the various forms of leucocytes, though with considerable skepticism and doubt as to the value of such study. It would seem, therefore, not out of place at this time to again call the attention of clinicians as well as all blood students, to the value of relative leucocytosis as a clinical sign, and to study its actual significance.

No one will deny that in most cases of inflammation the polymorphonuclear leucocytes show an increase in number out of proportion to the other forms, at the same time with and in the presence of an increase of the absolute number of leucocytes. In such cases, as for example, the ordinary instances of intestinal inflammations, tonsillar infections, appendicitis, pleural and abdominal effusion, pneumonia, etc., the process is expected and regular, and the preponderance of the multinuclear forms becomes the more marked with the intensity of the infection and the increased efforts at resistance on the part of the tissues of the body. In such cases we may say, as we have had occasion to remark before, both the absolute and relative leucocytosis to be of any value must be weighed in close connection with the clinical symptoms, and must never be depended on to form a diagnosis or allowed alone to indicate operative or any other vital measures. The writer has, however, yet to see a case in which either an absolute leucocytosis has been present, followed by a fall to or below the normal number of leucocytes, with a persistence of the high percentage of polymorphonuclear forms; or in which there has been from the beginning a complete absence of absolute leucocytosis, and yet a decided increase in the percentage (85 to 100 per cent.) of polymorphonuclear forms—to repeat, he has yet to see such a case in which there has not been found either a purulent collection, or some grave inflammatory process that threatens the life of the patient.

On the other hand, a considerable number of cases has been previously cited in which the truth of this assertion has been evidenced. The following, including several already mentioned, demonstrate both acute and chronic conditions in which the principle held true.

CASE 1.—*A child, aged 8.* This case presented a moderate absolute and a very high relative leucocytosis. This condition, as noted at the operation, would indicate that the resistance of the body was at a low ebb, and the absolute leucocytosis, therefore, not high. Forty hours previous to the blood examination she was well. Since then she had grown fretful, with pain in the abdomen. Had passed a few large round worms the day before, and vomited one. Her appearance was decidedly septic. Distinct pain and tenderness on pressure centered around the appendiceal region. Rigidity of the abdomen. Blood examination on Jan. 29, 1902, gave H. 74 per cent., r. b. c. 5,824,000, leucocytes 17,200, polymorphonuclear cells 96 per cent. No other pathologic changes in the blood. The operation showed a gangrenous appendix and a large quantity of foul pus in the abdominal cavity.

CASE 2.—A typhoid patient of six weeks' standing. This case illustrates the presence of a marked polymorphonuclear increase in the complete absence of absolute leucocytosis. The patient's general condition improved, and yet the fever chart showed that all was not as it should be; the high percentage of polymorphonuclear cells persisted until the physical signs and the operation demonstrated the presence of pus. In this case the typhoid influence was unfavorable to a leucocytosis, and yet, while it was not overcome sufficiently to allow of the production of an absolute leucocytosis, it was counteracted sufficiently to admit of a polymorphonuclear rise to 96 per cent. The temperature had several times reached normal, and for some days had been bounding up and down in a septic fashion. There had been no chill and no symptom over the body for some time since to account for the temperature. The blood examination, made for Dr. Morris J. Lewis (Jan. 9, 1902), gave H. 95 per cent., R. 4,960,000, L. 7,800; no differential count made. No malarial organisms. No pigmented leucocytes. Jan. 24, 1902, the blood showed H. 70-75 per cent., R. 3,832,000, L. 4,800. Polymorphonuclear cells 92 per cent. No other pathologic change in the blood picture. Condition continued without change and on Jan. 30, 1902, the examination showed H. 78 per cent., R. 4,962,000, L. 9,200, polymorphonuclear cells 92 per cent. On this day a slight bulging was made out in the apex of the vaginal wall. No abdominal tenderness or mass felt then or at any time previous. Operation showed a large ovarian abscess, from the pus of which a pure culture of typhoid bacillus was obtained. The blood examination made the day after operation (Feb. 6, 1902) gave H. 60 per cent., R. 4,320,000 and L. 7,900, the polymorphonuclear cells 72 per cent This last examination was made by Dr. Longcope at the Pennsylvania Hospital, and, of course, after the pus had been evacuated. The case was reported in full by Dr. Lewis at a later date.[1]

Case 3 demonstrated the influence of even a chronic suppurative condition on the percentage of polymorphonuclear cells, and this in the absence of an absolute leucocytosis. The patient was a Swedish girl, with a walnut-sized abscess of the axillary glands. Otherwise well. Blood examination before incision of glands (Feb. 10, 1902) gave H. 94 per cent., R. 5,220,000, L. 7,600, polymorphonuclear cells 94 per cent. No other pathologic blood changes. Blood examination on day following, H. 92 per cent., R. 5,232,000, L. 8,200, polymorphonuclear cells 78 per cent.

CASE 4.—Examined for Dr. F. A. Packard during convalescence from lobar pneumonia of several weeks' standing. Temperature irregular. Pneumonia still unresolved at the base of the lung. Symptoms indicate a pleural effusion, possibly of pus.

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[1] Amer. Jour. Med. Sc., October, 1902.

Blood examination (Feb. 11, 1902) gave H. 93 per cent., R. 5,264,000, L. 8,400, polymorphonuclear cells 96 per cent. No other pathologic changes. Pleural puncture was made, but no fluid was obtained. From this point on the patient improved steadily and rapidly. This case showed the condition of affairs that one would naturally expect with a mass of leucocytic infiltration in the chest, and throws light only on the novel action of the multinuclear cells in inflammatory processes.

Case 5 resembled in many ways Case 2, in that it occurred in a woman, and also in a typhoid case of weeks' standing. After a protracted course the temperature assumed a septic character, the patient appeared exhausted, an intense cystitis was present, and it appeared possible, if not probable, that a purulent collection was present, either as the result of typhoid infection or secondary to the bladder condition. The physical examination was equally negative with that in Case 2. The blood appeared thin, coagulation was slow; H. 48 per cent, R. 4,160,000, L. 14,200. The polymorphonuclear cells constituted 54 per cent. of the entire number of leucocytes. The Widal test was positive at this time. The case took a sudden turn for the better on the day following the blood examination, and by its subsequent history confirmed the suggestion of the low percentage of polymorphonuclear cells that neither pus nor active inflammatory influences were present in sufficient force to overcome that exerted by the typhoid infection in depressing the number and polymorphonuclear percentage of leucocytes. From that time on the convalescence was steady and complete.

This case was studied not long after the discovery of the purulent collection in Case 2, and with the latter constantly in mind. The presence of 14,000 leucocytes, with a polymorphonuclear percentage of only 54, will be considered subsequently in connection with the second point of our discussion.

This paper was nearly ready for publication when a sad and most striking instance of the occurrence of a high polymorphonuclear percentage with a steadily decreasing absolute leucocytic count, marked the almost certain time of perforation of the bowel in a physician well known to the profession and the public, and an intimate and cherished friend of the writer.

Case 6.—A physician, 39 years of age, with a previous history that was negative except for a slight recurrent bronchitis, and for several undoubted attacks of appendicitis during the past eighteen months.

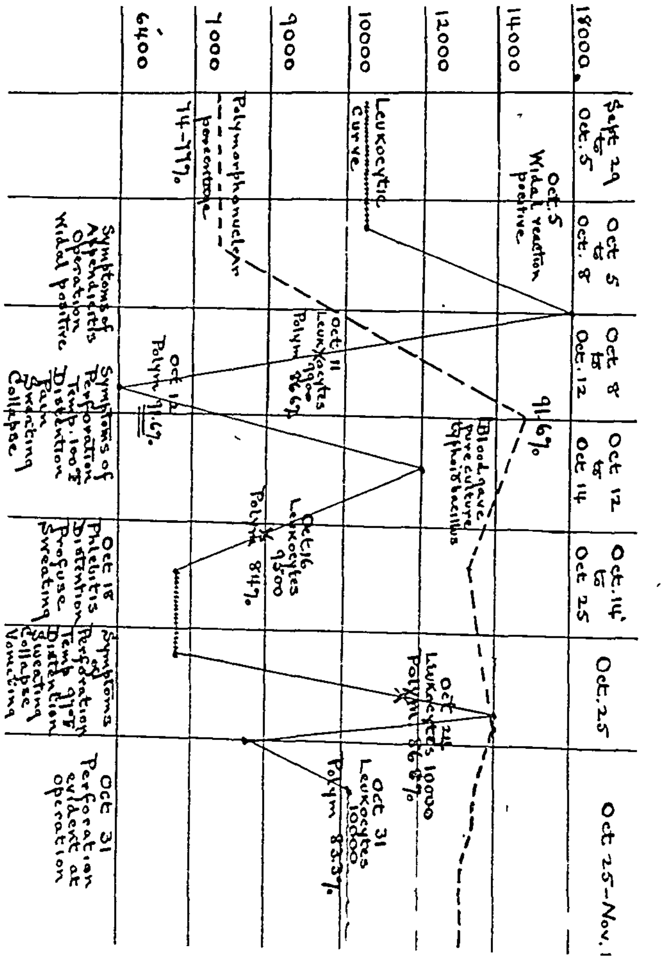
The writer saw him on Oct. 1, 1902, and, realizing that he was facing a serious illness, on the following day, because of close personal associations, transferred him to the care of Dr. Morris J. Lewis. The history of the past two weeks indicated typhoid fever, or a latent, increasing appendicitis, or both. The blood picture when first seen on Oct. 1, 1902, was H. 73 per cent., R. 4,880,000, L. 10,200. No malarial organisms. No pigmentation of leucocytes. No poikilocytosis. No differential count made. Widal test negative. On the following day the symptoms and physical signs suggested appendix trouble. The leucocytes numbered 10,400 and again 10,600. The polymorphonuclear count, however, showed only 74 per cent., and of small lymphocytes 17 per cent. Both of these blood examinations were made by the writer. On Oct. 2, 1902, Dr. Longcope examined the blood. The clinical symptoms still pointed to appendix involvement, rather than typhoid only. The Widal reaction was not yet perfect, though suggestive. On Oct. 5, 1902, doubtful spots were found; the appendix condition, for the first time, appeared secondary. The blood was again examined by the writer, who found the Widal test for the first time positive. The diazo reaction was strongly positive. The leucocytes numbered 9,800, the polymorphonuclear cells 77 per cent., the small lymphocytes were still 17 per cent. On Oct. 7, 1902, the leucocyte count rose to 14,900, and on the following day to 18,400. There was increasing tenderness in the right iliac fossa, and marked rigidity of the right rectus muscle. The appendix was removed. (A pathologic description of the organ will be duly reported by Dr. Lewis. It is sufficient to say that it presented unmistakable evidence of both chronic and acute inflammation.) The Widal test was again positive. On October 9 the leucocytes numbered 14,300; on October 10 14,100; on October 11 the temperature was 104 F., there was a marked chill, and the leucocytes fell to 9,900. The polymorphonuclear count was 86 per cent. No malarial organisms could be found. On October 12 marked signs of weakness; temperature fell to 100 F.; pulse feeble; profuse sweat; extreme abdominal distention and pain; leucocytosis. Polymorphonuclear percentage 91.6 per cent. Small mononuclear forms 4.2 per cent.

October 13.—Blood gave a pure culture of the typhoid bacillus.

October 14.—Wound opened in the lower portion. Marked distention. Profuse sweating. Leucocytes, 10,300.

October 15.—Leucocytes, 7,700.

October 16.—Leucocytes, 9,500. Polymorphonuclear forms 84 per cent. Small mononuclear cells, 10 per cent.



October 18.—Profuse sweating. Both legs slightly tender and swollen. Leucocytes, 7,300.

October 20.—Leucocytes, 8,800. No malarial parasites found.

October 22.—Marked distention and abdominal pain. Leucocytes, 10,000.

October 23.—Much distention, apparently confined to the colon. Leucocytes, 8,300.

October 24.—Marked distention. Leucocytes, 10,000. Polymorphonuclear cells, 86 per cent. Small forms, 8 per cent. During this day and the next severe pain in the left abdomen. Extreme distention. Considerable clear fluid removed from the abdomen. Vomiting. Temperature fell to 97 F. Leucocytes, 14,100.

October 26. Condition much improved. Wound healthy. Serum sweet. Leucocytes, 9,800. Extreme distention. Phlebitis distinct. Leucocytes, 12,250.

October 29.—Pain in left abdomen severe. Leucocyt

October 31.—Pain on pressure to left of umbilicus. Appearance of collapse. Gas and fecal matter escaped from wound on examination. Leucocytes 10,100. Polymorphonuclear cells 83.3 per cent. Small mononuclear forms 13.2 per cent. Operation. Large perforation (size of half dollar) in under portion of transverse colon, and surrounded by a gangrenous area. Region around perforation appeared closed off by exudate and adhesions. Death occurred on the following day.[2]

The last case to which reference will be made is one that came under observation also within the last months, illustrating the same point, though in a different way.

Case 7.—A woman, aged 38, of nervous habit, with a history of longstanding abdominal trouble. During the previous two years she had passed considerable quantities of blood in her urine; a lumbar operation was performed, and a movable kidney sutured in place. Since that time there had been constant and distinct signs of appendicitis until the autumn, when the patient was barely able to keep her feet. She was affected physically, nervously and mentally, and the right side of the abdomen was constantly rigid. With the progression of the case every symptom appeared to point to a collection of pus in the abdomen. The patient was delirious, the temperature that of a septic type, the abdomen rigid, and the history of a longstanding and neglected appendicitis, made the diagnosis of pus probable. The blood was examined just prior to the operation, with a view to confirming, and with no thought of questioning, the presence of pus. The blood picture was: R., 4,010,000; L., 9,400; polymorphonuclear cells, 89 per cent. No poikilocytosis, or other pathologic changes of the red cells. It was agreed before the abdomen was opened that if pus were present under the existing conditions there would probably be present a higher percentage of polymorphonuclear cells, and that the actual percentage (89 per cent.) could be accounted for by a simple inflammatory condition. This was found to be the case, and the operation revealed a long, chronically thickened appendix, containing about one-third of a teaspoonful of serous exudate.

Of course, in the light of cases cited in this paper, conclusions will, and should, be drawn. And yet conclusions should be carefully drawn or not at all. There is no one who will be tempted to say that we know or understand more than a fraction of the significance of relative leucocytosis. And yet, again, it seems certain that there is present in such a series of cases a pointed trend toward a connection between severe inflammatory conditions which appear in a system undermined and threatened with collapse, and a high polymorphonuclear count, especially in the presence of a marked decrease (gradual or sudden) in the absolute leucocyte count.

The most rational explanation of the fall of leucocytes and the persistence of a high polymorphonuclear percentage in cases of this nature appears to the writer to be the following:

In all inflammations and infectious processes the first and prompt tendency is toward phagocytosis, and in the procedure both the total number and the polymorphonuclear percentage of leucocytes increase. It appears that as long as the resistance of the body holds out the total number of leucocytes remains in excess of the normal. When tissue resistance gives way phagocytosis becomes less active, though not entirely done away with, and the total number of leucocytes diminishes. As long as phagocytosis is at all apparent, however, it shows in the increased percentage of polymorphonuclear forms, and at times this is excessive, even when vitality is so low as to be unable to furnish the slightest absolute leucocytosis. In other words, all the forms of leucocytes are diminished owing to the lack of phagocytic energy, which accompanies the loss of vitality in the tissues. Of the leucocytes that still remain there must be a proportional excess of the adult forms as long as any tissue energy remains, since these forms are most actively concerned in the protective processes of the body, and are most in evidence at such a time. It can not be assumed because there has been an excess of polymorphonuclear forms that when the total number falls the polymorphonuclear forms only remain in excess. This is by no means the case in simple acute effusions, in evident pus collections or in pneumonia; on the contrary, with the decrease in the total number of polymorphonuclear percentage also falls, or, as in Case 3, the polymorphonuclear percentage falls with even a rise in the total number of leucocytes. Case 6 seldom showed an absolute leucocytic count of over 10,000, and only once did it rise to 18,000. For the greater part of the time, however, with a constantly low numerical count (4-10000) the polymorphonuclear percentage averaged over 85 per cent., and at the probable time of perforation registered 91.6 per cent. with a total numerical count of 6,400.

Case 7 showed no absolute leucocytosis, a decided though not extreme polymorphonuclear leucocytosis, in the presence of symptoms all of which indicated a purulent condition. Probably the extreme depression of the patient was the cause of the absence of an absolute leucocytosis. Certainly, I think the appendiceal inflammation accounted for the polymorphonuclear leucocytosis, though in the absence of a numerical total increase, and the fact that this polymorphonuclear percentage remained a moderate one (as has not appeared to be the case in the presence of pus) was of decided interest in the light of the actual findings.

At just what point to call the condition a significant polymorphonuclear increase presents a serious question. It seems safe to say that the cases already studied indicate 80 to 85 per cent. of polymorphonuclear cells as a suspiciously high percentage, and in the absence of an absolute leucocytosis a very serious one. Over 90 per cent. would appear to be still more indicative of active and grave inflammatory processes, and usually suggestive of purulent or other leucocytic exudates or effusions. Pneumonic consolidations give this picture, as may also acute and chronic pus collections, and nearly all septic intoxications. If in any of these conditions the absolute leucocytosis disappears, and the polymorphonuclear percentage continues high, we have a warning of overtaxed powers of resistance. As all powers finally give way even the polymorphonuclear percentage must fall, as it is the last sign of a worn-out energy. It is not safe to form iron-bound rules for new principles; but if any new principle seems to be well grounded on fact it is the one that urges scrupulous attention to a patient whose leucocytes show a high polymorphonuclear count in the absence of an absolute leucocytosis.

ABSOLUTE LEUCOCYTOSIS.

Far less need be said at the present time in regard to the occurrence of an increase in the total number of leucocytes in the blood under inflammatory and similar conditions. There is still in existence, as there always will be, a small body of men who persist in striking at the phantom of a leucocytosis that will diagnose a case or decide difficult operative questions. Needless to say they will wear themselves out in the effort and with no injury to the ghost that never assumed material form. The great mass of clinicians (and this term includes distinguished clinicians as well as a large class of so-called country doctors that are not a whit behind the city men in energy and up-to-date methods of medical diagnosis) is learning to look on the occurrence of an absolute leucocytosis as only a clinical symptom, though sometimes a very significant one. It may occur in slight degree in absolutely healthy persons; it may also point to a fatal condition. In every instance the particular individual and the particular leucocytosis must be considered together in order to obtain any value from the study and in order to avoid error.

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[2] These notes are inserted owing to the courtesy of Dr. Morris J. Lewis, who will report the full clinical history elsewhere.

In many cases nothing new will be learned from the examination of the leucocytes; in many others invaluable information will be derived. Moreover, it can not be denied that in certain conditions even a pus collection may be so nearly walled off from the general circulation as to have no serious effect on the processes required for a seemingly healthy existence. Such an instance is seen in occasional large abscesses of the liver, especially the tropical form, which are known to have existed beyond shadow of doubt within active persons for years before evacuation. Sometimes these fail to cause an absolute leucocytosis, even though the resisting powers of the patient are good; and the explanation of its absence must lie in the fact that a membrane of such density is formed as to protect the circulation from the influence of the purulent process, and must in like manner prevent the very process necessary to the production of a leucocytosis. Just as fever, pain and swelling may all be absent in the presence of a pus collection surrounded by a dense fibrous membrane, so the absolute leucocytosis seems occasionally to fail, and for the same reasons. The writer has as yet, however, never seen a case of so-called walled-off abscess in any portion of the body that failed to present a relative leucocytosis of the polymorphonuclear cells.

It seems hardly necessary to state that the leucocytes vary normally from 5,000 to 10,000 in a single individual, and that digestion and exercise are two of the most common causes of such variation. Any text-book on the blood will advise the reader that a leucocytosis, to be significant, must be of decided proportions, and certainly an increase over the number normal in a given person. Most text-books, however, fail to state that the presence of a leucocytosis is one clinical sign, and that there is no clinical sign known to-day whose value is not to be estimated as part only of a complex picture. The fact is also usually overlooked that one examination of the leucocytes is not only unsatisfactory, but often misleading; and that frequent and even constant examinations must be made in order to obtain the full and certain value of any study of the blood. No number of leucocytes can be fixed at which we can say that pus or any other inflammatory or infectious condition is present. In one subject 20,000, in another 50,000, and in another double that number, of leucocytes will be found suggesting identical conditions, and yet each of these figures is suggestive of a certain order of process that will be still more strongly indicated by the complete clinical picture. There has never been a more untrue accusation than that the students of leucocytosis are endeavoring to decide on operative measures and make diagnoses that will rest solely on the blood picture. Such accusations are always made by men who have heard and believed the enthusiastic beginner, or who hear half a statement and lose the gist of the argument because they have not had time or interest to listen carefully or well. Such men make serious mistakes, as the result of a misuse of a valuable clinical sign, and lay the blame for a result for which they themselves are solely responsible at the door of an innocent and valuable measure.

Perhaps one of the most pertinent suggestions given by an increase in the total number of leucocytes is obtained when constant examinations show either a persistently high count, accompanied by symptoms and physical signs that point to a localized process, or a gradually but steadily increasing count (total) under similar conditions. A gradually falling leucocytosis usually indicates a bettering of the general physical condition. We have already laid sufficient stress on the study of the polymorphonuclear percentage to fear that this last assertion will be misinterpreted. Occasionally every physical sign and symptom will abate and improve, and the total number of leucocytes fall to or below normal, though the actual condition is one of grave seriousness. In such cases the relative leucocytosis may be relied on to warn of impending danger; at this point all clinical symptoms and signs fail. Procedures must, in the light of our present knowledge, be undertaken that may not seem clearly warranted, and with the full knowledge that the interior of the body presents riddles that can not always be deliberately solved. Any and every leucocytosis should be looked on with grave suspicion, but with the full knowledge that it is only one clinical sign, and that clinical signs are only signs after all. The prevailing wind may cause them to point in the wrong direction. When this is fully realized the so-called dangers of blood study will have been lost sight of, and certain reluctant semi-students will fall into the line of those who use to full advantage every form of leucocytosis that may be found present, after a number of thorough examinations of the blood has been made. They will then no longer insist either that the breath sounds are always absent over a pleural effusion, or that a leucocytosis, when properly studied, is misleading. The experience of men who are to be trusted has too often proven both of these beliefs to be without foundation.

The final and all-important question is: "Of what clinical value is a leucocytosis to the practitioner?" The experience of the writer at the bedside and in the laboratory leads him to answer as follows. As long as the clinician considers first the physical signs, then the temperature chart and history of the case, and lastly the report of the laboratory examinations of all obtainable excretions and secretions, and finally all three in their proper relation to one another, just so long will he find the presence of a leucocytosis, whether absolute, relative, or both, of inestimable aid. Its presence or absence should never, let it be once again repeated, alone decide in favor of one diagnosis or form of treatment or another; or persuade the surgeon to operate unless other indications of convincing nature are present. But in their presence such evidence as a marked absolute or polymorphonuclear leucocytosis must assuredly bear great weight; and when followed day by day—as it should be in a serious case—a leucocytosis may point to the correct solution of a grave problem. Who knows but that what we have learned from the behavior of the leucocytes in cases such as have been presented may save to us precious lives such as that so recently lost to the medical profession and the world at large. Experience and desire were at a loss to ascertain either the state of affairs within the abdomen or the proper course to pursue; another hint in such a case is beyond price. In a sudden rise, or a steady gradual increase from hour to hour, or from day to day, we have a sign board that means danger, and points to a careful study of physical signs. A leucocytosis never can indicate pus, or any other inflammatory condition, and should never be allowed to influence treatment in the absence of other equally convincing evidence.

In certain conditions a leucocytosis indicates the retention of considerable resisting power on the part of the patient, as in pneumonia; and in like manner in the presence of pus, the physician would fear to see the number of leucocytes fall while the purulent collection remained in the body. It is a different matter when the total number of leucocytes is low, and the polymorphonuclear percentage is very high. It may then be inferred that a grave condition is present, and it is fair to assume that the polymorphonuclear increase is the indicator of all that is left of resisting power on the part of the body. Let this loss of tissue energy decrease still further and if the principle hold true even the polymorphonuclear increase must fall with the complete collapse of phagocytic action. We have still much to learn from the study of actual cases, but we have progressed far enough to lay hold of certain indications that will be valuable when other signs have failed. It is warrantable to state that no case has as yet been observed in which normal processes have been accompanied by such a blood picture.

ABSOLUTE LEUCOCYTOSIS IN THE ABSENCE OF POLYMORPHONUCLEAR INCREASE.

Case 6, as already noted, furnishes at least one instance of the occurrence of a moderate leucocytosis (absolute) in the absence of an increase in the number of multinuclear cells. (See footnote at end of article.) Just what significance to ascribe to this is not easily determined. There were present a typhoid infection that would tend to diminish the absolute number of leucocytes (which it failed to completely do), and the polymorphonuclear percentage, and also a cystitis that would have the opposite influence. The result seems to have been a compromise. Probably the typhoid infection was by far the most potent influence, and certainly it was the one that at that time dominated the system. The cystitis was also, no doubt, of typhoid origin; and yet the pus formation must have been so local in its influence, and so completely drained through the ready outlet through the urethra, that the suppuration had little or no influence on the general economy in comparison with the typhoid poison. Occasional cases of typhoid fever, and, in fact, certain normal persons, present an average leucocytic count of several thousand above the customary figure (5,000 to 10,000), and 14,000 in this case may not have been a leucocytosis. It appears more likely, however, that it did represent the slight influence of the local suppuration on the blood and tissues, held in check by the typhoid infection. Other and similar cases have been noted in which the absolute leucocytosis was even of a less degree and therefore even more questionable.

CONCLUSIONS.

The following conclusions seem warranted:

1. The term leucocytosis must include every increase in the absolute number of the leucocytes of the blood examined, as well as every increase in the percentage count of the various leucocytic forms.

2. A leucocytosis, of whatever nature, must always be regarded as a clinical sign of importance, but never of such weight as to influence against equally convincing physical signs.

3. A high percentage of the polymorphonuclear forms in the absence of an absolute leucocytosis indicates the presence either of pus or of some grave inflammatory process, together with a low vitality of the patient.

4. Specific factors may rarely exert such an unusual influence as to interfere with the customary reaction of the polymorphonuclear cells. At least one instance has been noted in which the total number of leucocytes was increased at the same time with a marked reduction in the number of the polymorphonuclear forms. This condition is, probably, seldom encountered.[*]

5. Single counts of the leucocytes, or single estimations of the leucocytic percentages are often misleading; while a persistent series of observations will seldom fail to aid in the diagnosis and treatment of the condition.

6. A gradual, but steady, rise in the total count of leucocytes above the customary number usually indicates the presence of an active and augmenting inflammatory influence. When this increase reaches large proportions it may be looked on as an indication of the presence of an active leucocytic process (seroses or purulent effusion, localized pus collection, pneumonic exudate, etc.), provided the clinical picture also bears out the suggestion.

IS THE CONSUMPTIVE CHEST FLAT?

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Some years ago, in the course of a study of the disease-liabilities of the human as compared with the animal chest, I was led to take some measurements of the diameters of the human chest at various ages and in certain diseases. The results of these were somewhat unexpected, and led to further researches, of which a preliminary report was read before the Philadelphia meeting of the Association in 1897, and published in THE JOURNAL of the American Medical Association, Sept. 11 of that year.

Since that time I have been gradually accumulating further data, though unfortunately delayed by a period of impaired health, and as these are now sufficient in number to give a reasonable probability of correctness to deductions drawn from them, I have ventured to again report progress through the columns of THE JOURNAL. A short résumé of the position taken in my former paper will be necessary to clearness.

My views may be briefly summed up in the statement that the tuberculous chest instead of being flat is really round; that the antero-posterior (sagittal) diameter, instead of being diminished relatively to the transverse, is, on the contrary, increased, so that the term "flat-chested," as applied to the consumptive, is really a misnomer.

So far as I have been able to discover, no text-book—with the exception of the last edition of Cabot, which mentions my findings—or other authority on physical diagnosis supports this view; on the contrary, most of them directly controvert it. Manual after manual of physical diagnosis repeats, parrot fashion, the time-honored statement that the typical tuberculous chest is flat, in support of which is shown one ancient drawing of what I am strongly tempted to regard as a purely ideal chest-outline, usually copied from Gee, and by him derived from heaven knows what remoteness of antiquity. It is therefore with a full realization of the unorthodox and perhaps insufficiently tested character of my position that I shall proceed very briefly to outline my reasons for the belief that is within me.

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[*] Since the preparation of this paper the writer has had the privilege of studying a case of appendiceal abscess, yielding a pure culture of the colon bacillus, in which later an abscess formed posterior to the bladder, and still later another posterior to or within the liver, the pus from both of which also gave a pure culture of the same organism. The total count of the leucocytes varied from 20,000 to 46,000, and at no time was the polymorphonuclear percentage above 80, usually ranging from 70 to 75 per cent. The influence of the colon bacillus on leucocytosis will be discussed in a later full report of this case.

As all are aware, the human chest is, with one or two exceptions (the bats and the whales), almost unique in the animal kingdom, in that its transverse diameter is the longer, and this, of course, is obviously associated with the locomotive necessities of the anterior limbs in the quadrupedal and the erect positions respectively. The animal or quadrupedal chest having to be carried between the parallel-moving anterior limbs, naturally disposes its air space in the shape of a box, having as little width in its anterior part as is consonant with sufficient heart room and general vigor. Of this the familiar "deep" chests of the hound and of the race horse are illustrations which will occur at once. It may be remarked in passing that in every order of vertebrates it is the exigencies of locomotion which seem to determine the shape of the chest. Even before lungs are present it is "deep" in the earlier forms, the fishes, for obvious "yacht-shape" reasons; rounded in most amphibians and reptiles which crawl flat-bellied, with legs (if present) wide apart; rounded in birds with their wide-apart wing attachments, although crested with a great keel which gives it an opposite appearance; "deep" again in all quadrupeds with their parallel-moving anterior limbs, but flattening out in the fliers, like the bats, the pure swimmers, like the whales, and our own biped-climbing, upper families, the apes, and man.

The impression under which I began my study of the disease-liabilities of the two forms of chest was that the human chest had become more subject to disease from over-specialization, so to speak, and that the consumptive chest would be found to be, if I may use the term, the super-human chest form, having departed farthest from the normal type and vigor. To my astonishment, however, I found that my first six or eight measurements made on consumptive chests, showed an actually greater antero-posterior diameter relatively to the transverse one than the normal chest. I concluded that I must have been mistaken, and returned to the attack on fresh cases. But to my surprise the first result was absolutely corroborated by almost every successive case, until finally, when I had collected about forty measurements of tuberculous chests, I found that the average index of these was nearly ten grades higher than that of the normal.

First of all, however, I found myself compelled to establish or determine what was the normal chest index —and, indeed, to invent the index for myself. By "index" I simply mean that same statement of relation between diameters which has proved so exceedingly useful in craniology, applied to the chest. Taking the transverse diameter as 100, I express the antero-posterior diameter in percentages of this, just as is done between the antero-posterior and transverse diameters of the cranium. This I found to be, from measurements of about 50 normal chests of students, and soldiers in the garrison at Buffalo, through the kindness of my friend, Major Appel, then surgeon-in-charge, to be about 70; in other words, the antero-posterior diameter, or "depth," of the normal chest is about 70 per cent. of its width. After I had secured these measurements for myself, my search for other measurements giving a chest index was finally rewarded by the discovery of a large number of measurements taken by Dr. Seaver on the students in the Yale gymnasium, these covering 2,300 individuals, and giving almost precisely the same index as I had already elicited, namely, 70. This, then, I think, may be fairly taken as the average index of the normal chest, although, of course, I wish to be distinctly understood that there are very considerable variations, some of the measurements having gone as low as 62 or 63, and a few having gone even as high as the tubercular level of 80, or above. The average index of the 40 tuberculous cases, on the other hand, was 79½, making them nearly 14 per cent. (10 degrees) deeper than the normal chests.

This result at once brought into suggestive prominence the well-known fact that this round chest was the normal state of affairs in infantile and child life, and I proceeded to make a number of measurements of embryos from the fourth month up, of infants, of children, and of boys and girls up to the ages of 17 or 18, with the result of finding that the axes or diameters of the chest at birth were nearly equal, giving it an index of 101; in the embryo the index runs as high as from 105 to 115; in children under two years, the index had fallen to about 94; in children from 3 to 7 years the index averaged 85; while in boys of from 14 to 18 years of age it had flattened down to a little above 80.[1] The conclusion was obvious, that the type of chest most common in tuberculous cases was a persistent immature chest, in other words, was a chest which had practically retained the form normal at about the age of from 15 to 18 years.

I could still hardly bring myself to believe that such was the case, until I began to examine critically the actual chest shape in apparently flat-chested boys and children, when I quickly discovered the optical delusion, which has given rise to our prevailing conceptions as to the flatness of the immature and of the tubercular chest.

Briefly stated, flatness of a chest is merely an index of the position of the shoulders. Your flat-chested individual is almost invariably round shouldered, and if you will simply take the trouble to seat your flat-chested child or consumptive patient on a low stool, put your knee in the middle of his back, a hand on each shoulder, and pull the shoulders back into something like their normal, dorsal position, you will at once see, on looking down the front of his chest, that the actual shape of the rib-cage is rounded and barrel-like. Indeed, it is this very shape which has given rise to the abnormal position of the shoulders.

In the normal chest the posterior surface of the chest wall is sufficiently flat to allow the inner surface of the scapulæ to rest comfortably on it, and the shoulders fall back easily and remain naturally in the so-called erect, or military, position. In the rounded chest of the child or the consumptive, on the other hand, the scapulæ, having no flat surface on which to rest securely, their lower angles projecting out "like wings," as some poet-anatomist has said (alar), from the sharply rounding chest wall, roll forward in the direction of least resistance, pulled also by the great pectoral muscle-sheets, and come to rest, instead of, so to speak, at the outer and upper corners of the chest, almost on its anterior wall. The so-called "muscle-bound" plowman or bench workman has almost the same sort of shoulder position. In fact, almost incredible as it may seem, we have been misled by analogies drawn from the animal kingdom, and instead of the "deep," human chest, that is, the chest with the long antero-posterior diameter, being the type of vigor, it is just the reverse. and the *healthy, vigorous*

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[1] For [illegible] measur[illegible] my "Studies in [illegible]

human chest is the broad, flat, well-expanded, low-indexed type.

A moment's consideration of the mechanism of respiration in the two cases will, I think, show the truth of this, at first sight, almost absurd conclusion. Both of them are, for mechanical purposes, bellows. In the quadruped, on account of the position, and necessity for parallel movement, of the anterior limbs, the bellows must be turned, so to speak, on its side, and the largest part of the respiratory movement must take place behind the shoulder girdle, of which the heaving flanks of the grey-hound or the rapidly-galloped horse are striking illustrations.

In man, on the contrary, after the erect position has been assumed and the shoulder masses have rotated outward and backward, in order to give freer play to the hand and arm for the use of the tool and weapon, the scapulæ come to lie at first on the outer and finally on the posterior or dorsal aspects of the chest. This, with the lateral pressure of the arms and elbows, leaves the anterior surface of the chest freest, and the movable flap of the lung bellows becomes turned in that direction. So that the antero-posterior range, which is almost absent in the quadruped, becomes equal to, if not slightly in excess of, the lateral flap-swing. At the same time, of course, the diaphragmatic respiration has become relatively less than in the quadruped, loaded, as that great muscle sheet has now become, with a share of the weight of the liver, in the erect position.

Thus the relative value of the different factors in respiration has been markedly altered in the human chest, and this fact is one which, in my judgment, has not received the consideration to which it is really entitled. These may appear like somewhat positive conclusions to reach on the basis of such a comparatively small number of measurements, but I must explain in defense, if there should be any misapprehension, that this apparent positiveness is merely due to the brevity of the statement which is required.

The next series of measurements which I was able to secure of tubercular chests in any considerable number was at the celebrated Brompton Hospital for Consumption, in London, during a term of research work abroad. For these I am indebted chiefly to the courtesy of Dr. C. Theodore Williams and the members of the attendant staff and the kind assistance of my friend Dr. J. C. Conner. These cases numbered 42, and while taken not merely on the other side of the Atlantic, but also in a different social class from my American series, corroborated its results in a really singular manner. The average index of the 42 cases was 79.6 as compared with 79.5 in the almost identical number of American cases. Through the courtesy of Dr. Rolleston I was asked to present these results before the current meeting of the British Medical Association (1899), and they were published in the *British Medical Journal*, Oct. 28, 1899, and a few months later formed the basis of a chapter in a monograph published about two years ago.[2] This publication was the means of interesting a number of other members of the profession in the question, and I am now able to report a list of 75 cases from Dr. E. H. Colbeck of London, which he has most kindly and generously sent me, taken at the Victoria Park Hospital for Diseases of the Chest. The general average of this is in singularly close accord with the other series, namely, an index of 80.3. The agreement is even closer when the cases of the series which occurred in women, 14 in number, are eliminated, which leaves a male average of 79.3, which is extraordinarily close to my average for the Buffalo and Brompton series, 79.5 and 79.6, respectively. This is the most interesting and valuable series which I have yet received. First, from the fact that it contains a larger number of women, in whom measurements are for obvious reasons much more difficult to secure, and second on account of the large number of cases in an early stage of the disease.

No less than 42 of the 75 cases were in an early stage, and the fact that their average index was 77.6, less than 2 degrees below the average of the whole series, strongly corroborates my tentative view that this shape of chest is a precedent symptom of the disease and not a result.

The series of 14 measurements in women is also interesting as showing a very much higher index than even the already heightened male degree, namely, the average being 84.3. This, of course, is only what one would expect from the well-known greater persistence of the infantile shape of the chest in women, but as to how far it rises proportionately above the average index of the normal female chest I have not been able to secure a sufficient number of measurements to base a statement on.

Two cases in this interesting series are recorded, one as in the very early, and the other prebacillary stage, and as one of these has an index of 83 and the other of 82, it would seem certain that in some cases at least this shape of the chest preceded the disease.

Three other responses have also been made within the past few months to my request for assistance and measurement blanks sent out. The first of them is from Dr. Franklin White of Boston taken at the Long Island Hospital, and these number 35 in all and give an average index of 77.9, nearly 8 degrees above the normal and only 1.6 degrees below the average of my other cases. Of these 10 were in women with a slightly higher index of 78.3, but below the average of the Victoria Park women. Of the 35, five are recorded as in an early stage, and these are an even more striking indication of the pre-existence of this type of chest, in that their index is 79.6, or 1.7 above the average of the series. Dr. White's series is especially worthy of notice from the wide range of extremes in individual cases, not less than 8 of the 35 being at the norm of 70 or below, four of them falling as low as 63 or 64, thus showing that, while the overwhelming majority of tuberculous chests are of high index, the disease is by no means confined to this type of thorax.

The second is from Dr. W. A. Evans of Chicago, who, with Dr. M. G. McHugh, physician in charge of the Cook County Hospital for Consumptives, has gathered together a splendid series of 107 cases with an average index of 80.8. This was published in the *Medical Examiner and Practitioner*, October, 1902, and while it does not give a table of measurements in detail, so that I am unable to analyze it, the conclusions, which are quite fully elaborated, support my own at every point. A small number of cases of early tuberculosis which they have examined shows a high index and they heartily endorse my view, that the persistence of a chest index of over 70 is a sign of arrested development and of greater degree to susceptibility to tuberculosis than that of the normally shaped chest.

A new and valuable addition is made by their series of 38 measurements, taken on inmates of asylums and paupers, not suffering from tuberculosis, and show a much higher index than the normal. This is of great importance, inasmuch as it agrees with both my own measurements on this class, taken at reform schools and other institutions, and also with some measurements made by Dr. Arthur McGugan of Denver, who informs me in a personal letter that he finds this round, prominent type of chest common among the chronic insane. I have long been inclined to regard this type of chest as indicative of general arrest of development, and I should not be at all surprised to find it present in almost as large a percentage of the chronic insane as in those suffering from tuberculosis. To phrase it roughly, one may perhaps be regarded as a physical degenerate who breaks down in the lung, and the other as a physical degenerate who gives way in the brain, and it must also, of course, be remembered that an enormous percentage of the insane (from 30 to 60 per cent.) die ultimately of pulmonary tuberculosis.

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[2] "Studies in Human and Comparative Pathology," H. J. Glaisher, London, 1901.

Last of all is a series of 35 cases from my friend, Dr. Albert Abrams of San Francisco, which gives an average index of 78, and which he has kindly permitted me to use, although yet unpublished. He, however, inclines very decidedly to the opinion that this shape of chest is due to an emphysematous condition of the lungs, which he has found, and I believe correctly, to be present at a very early stage of tuberculosis, if indeed it does not precede the disease.

This, then, makes a total of over 350 cases of tuberculosis in which chest measurements have been taken, every component group of which gives an index of from 77 to 80.8, the general average being 79.7. This, though still hardly sufficient to base a positive statement on, does certainly seem to me to furnish good grounds for a careful reinvestigation of the question and a defense and justification of the almost unanimous statement in the text-books either on practice or physical diagnosis that the tuberculous chest is flat.

My list of personal measurements is steadily growing and new lists are being sent in to me, from time to time, by the kindness of my friends in the profession, and as soon as I have accumulated 500 or more I propose to send a circular letter to the authors of the standard text-books on physical diagnosis and practice of medicine, asking them to kindly send me the data on which their statements and occasional outlines are based, or failing these, to reinvestigate the subject for themselves.

In the meantime I have prepared printed blanks for recording, with full direction for taking, chest measurements, and shall be most happy to send copies to any of my readers who may be sufficiently interested in the subject to make a few measurements in their wards or clinics. I would be especially grateful for any groups of measurements, no matter how few in number, taken on private patients, the vast majority of my data hitherto having come from the hospital classes. The measurements may be taken with an ordinary pelvimeter or large carpenter's calipers with an inch or centimeter scale; the antero-posterior diameter by letting one point rest on the sternum at the level of the nipple (male), the other on the dorsal spinous process horizontally opposite. The transverse diameter is obtained by sliding the tips of the calipers backward at the nipple level until the widest possible point of separation is reached, behind which they will, of course, begin to approach each other again, then read off the scale; both measurements to be read off in the post-expiratory pause or resting position of the chest.

From the evidence so far presenting, the following conclusions seem to me reasonably probable, though, as before stated, I do not feel justified in advancing any more positive position than this until I have secured at least 500, and preferably 1,000, measurements, taken on all classes and nationalities.

First.—The typical tuberculous chest is round instead of flat and has an average index of about 80, nearly 10 degrees above the normal.

Second.—This type of chest precedes the disease.

Third.—It is an abnormal persistence of the fetal, infantile and child type of chest.

Fourth.—Any chest more than 18 years of age which shows an index of 80 or higher should be regarded as abnormal and as rendering its possessor more than usually liable to tuberculosis.

Fifth.—The occurrence of such a chest in any patient over 18 years of age, suspected of tuberculosis, raises a strong probability of the disease.

Sixth.—The chests of growing boys and girls should be systematically measured at stated intervals, and wherever the index is found distinctly higher than that normal for their age active measures should be taken to remedy the defect.

Seventh.—All those sports and exercises which involve wide-swinging use and play of the arm, chest, shoulder group of muscles, such as tree climbing, swinging from ladders, from rings, from bars, ball throwing, spear hurling, tennis, swimming, will tend to correct this defect and flatten the chest down to its proper index.

These, in fact, are the influences which have made the human-chest shape, and all that is needed to perfect it in the individual is a healthy reversion to the arboreal habits of our prehuman and the war sports of our savage ancestors.

BLOOD PRESSURE DETERMINATIONS IN GENERAL PRACTICE,

INTRODUCING A PRACTICAL INSTRUMENT FOR ROUTINE USE.

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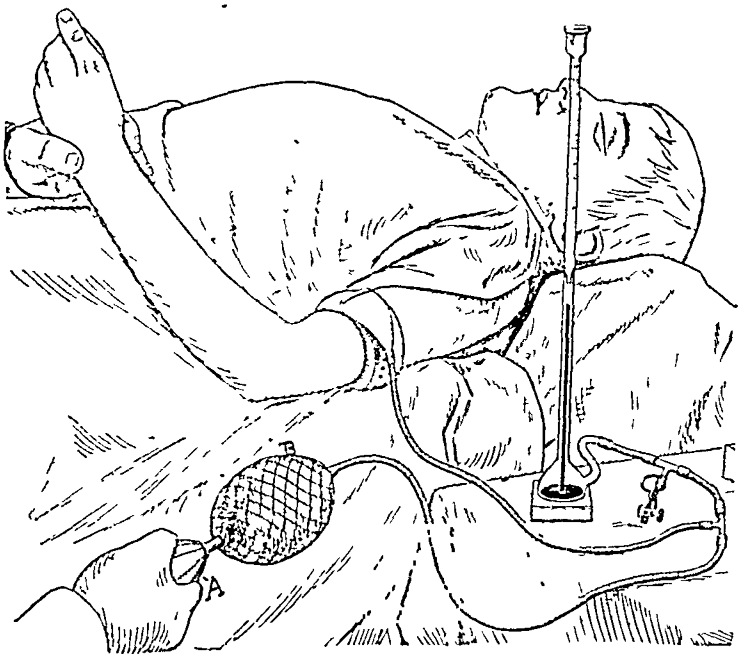
Accurate measurement of arterial tension, which has formed the experimental basis for the physiology of the vascular system since the invention of the kymograph by Ludwig in 1847, has received but little attention from clinicians until of late. The results derived from these laboratory experiments on changes in vascular tension have been appreciated and adopted by the practitioner and form no insignificant part of the *rationale* of his diagnosis and therapy, but while the methods remained of a nature that restricted them to the laboratory they could have no direct clinical application.

Within the past few years several instruments have been devised which have been constructed on a sufficiently practical principle to admit of their extended clinical use. Already the literature relating to clinical blood-pressure observations is voluminous, and one can not glance over a current medical journal without seeing repeated references to this work. From many of the larger hospitals in this country and abroad are coming reports of observations on blood pressure in various morbid conditions, and a vast quantity of valuable material is being acquired which will place arterial tension and its significance in a new light before the medical world. The conception of arterial tension and its therapy must be revolutionized since its determination is removed from the obscure realm of indefinite denomination and per sonal equation to the plane of mathematical accuracy.

It is not the purpose of this paper to give the results of any cumulative work on blood pressure. I have already emphasized the value of routine determinations in stimulation, and in connection with Dr. Briggs will soon give[1] the results of our observations on blood pressure in a variety of conditions occurring in the wards of the Johns Hopkins Hospital. I merely wish here to present the use of an accurate estimation of arterial blood pressure in the wider field of general practice, and to describe an instrument which I have previously referred to,[2] and which I hope may render such determination easier and more practical than is possible by any of the forms of apparatus now obtainable.

My first observations were made with the Gartner apparatus, which, however, proved very unsatisfactory, both for accuracy and ease of application. On account of mechanical difficulties in the instrument itself, and vasomotor changes in the finger of the patient, morbid states involving extreme variations in pressure, such as shock, hemorrhage, toxic hypotension and the hypertension of uremia and apoplexy, could not be followed with any satisfaction, and the instrument is almost inapplicable in the negro and very young children.



The Hill-Barnard apparatus I have not used; first, because I believe maximum pressures to be the best index for systemic force, and this instrument registers minimum pressures only; second, because it requires considerable time and training to manipulate; third, because it involves the use of a spring manometer, which is always liable to be inaccurately gauged and can never be depended on for correct reading unless controlled by a mercury manometer.

The Erlanger apparatus, which combines the principle of the Riva Rocci and the Hill-Barnard instruments, and so gives both minimum and maximum readings, is the ideal for physiologic research; but I found it too ponderous and bulky for clinical work. Messrs. Brush and Fischer used this instrument in the wards of the hospital for some valuable observations on blood pressure in typhoid fever, but it required two men to carry and operate from bed to bed, so was obviously precluded from very extended clinical use.

Dr Cushing had introduced the Riva Rocci apparatus into use at the hospital, and this instrument I found by far the most satisfactory for routine determinations. The principle is simple in the extreme and its practical application easy.

There were several features of the original form of the apparatus which made it inconvenient to handle, such as the complicated arrangement of the mercury manometer and tubing connections and the loose scale, and it also, with other mercury manometers, was so high and unwieldy that it was impossible to carry it to outside visits. The instrument which I present here attempts to apply the Riva Rocci principle in a compact, simple form that will render it serviceable to the general practitioner.

The apparatus consists of three essential parts connected by rubber tubing, a manometer, an arm piece and a bulb with valve attachments. These form a closed air system throughout which pressure is everywhere transmitted equally.

The manometer is entirely of glass, so that readings are not obscured at any point by cork or other jointing. A vertical tube scaled to 350 mm. fits below and projects into a glass reservoir containing mercury. An outlet tube entering the reservoir near the top allows free communication with the rest of the system. The scale, divided into centimeters and millimeters, is etched on the glass, avoiding the possible errors incident to a loose scale behind the glass. The upright tube at the level of 210 mm. is divided by a glass joint fashioned like a ground-glass stopper, the upper end fitting into the lower. This arrangement permits the manometer being packed into a small, easily portable case, and removes the only objection to the mercury manometer, i. e., the amount of space a sufficiently long tube occupies. The lower tube scaled to 210 suffices for all cases except those with marked hypertension, and for the latter it is only necessary to adjust the upper portion. I have considered the mercury manometer as essential for accuracy and reliability in recording pressures. Spring or aneroid devices are always liable to gross errors of adjustment, and require constant control by a mercury manometer. The weight of a certain column of mercury is an absolute quantity, except for the constant fractional variation for temperature.

The arm piece is to transmit the pressure to a peripheral artery of the patient. In estimating pulse tension by finger palpation we obliterate the radial artery by downward pressure against the firmer tissues below. This principle, which was also that of the earlier sphygmomanometers, entails many errors due to position, caliber of artery, thickness of intervening tissues, thickness of arterial wall, etc. The principle of the Riva Rocci method of applying this pressure overcame these difficulties and, according to Janeway, marked the greatest advance in the history of the sphygmomanometer, the one which at once made readings accurate and easily applicable clinically. The pressure, instead of being applied in one direction on the artery, is applied equally around the artery. An extensile rubber bag completely encircles the arm and the pressure is thus transmitted equally through the medium of the tissues to the artery, perpendicular to its wall at every point. This principle minimizes the effect of anatomic and structural peculiarities. The rubber bag is covered by a canvas support with hook and eye attachments, which admits of its being fitted to any size arm.

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[1] Johns Hopkins Hospital Bulletin, May, 1903.

[2] American Journal of Medical Sciences, March, 1903; Maryland Medical Journal, January, 1903; Johns Hopkins Hospital Bulletin, February, 1903

The rubber bulb by which the operator raises the pressure in the air system and the reservoir bulb are similar to that used in a Paquelin cautery. An outlet tube, guarded by a spring pinch cock, is introduced in the system near the manometer so that the pressure may be released after each reading.

A reading should not take longer than the half minute required for a pulse count, and may be made by any one at all trained in pulse palpation. The band is adjusted snugly around the patient's upper arm as the place of choice, well above the condyles of the humerus. I usually place it almost midway between the elbow and shoulder, though this is unimportant except in very muscular men, where the sharp slope of the biceps in the lower third of the upper arm makes application here inadvisable. The observer then, palpating the radial of the patient distal to the band, quickly raises the pressure in the air system by squeezing the bulb A with the other hand until the pulse is obliterated. This pressure, as registered by the manometer, is noted and the column of mercury allowed to fall slowly until the pulse returns. These two points are confirmed without releasing the pressure, merely varying the column of mercury between them by alternately squeezing and releasing the bulb B. The two points will usually be 2 or 3 mm. apart and the mean between them is the maximum arterial blood pressure. Thus, if the pulse lost at 127 mm. and returns at 125 mm., the reading is called 126 mm.

The minimum pressure as demonstrated by Howell and Brush occurs during the maximum oscillations of the artery wall. These are transmitted to the mercury column and the minimum reading may be determined approximately with this instrument, as described by Gumprecht, by noting the point of maximum oscillation of the mercury column after the tube leading to the bulb B is clamped off.

The only instrument that gives exact readings of minimum pressure is that of Erlanger, and the amount of extra apparatus necessary for this determination makes such an instrument too bulky for routine use. The instrument presented here is intended primarily for maximum blood pressure readings, and only exceptionally will the minimum reading be of clinical significance. However valuable it is in physiologic research to know the exact measure of the pulse wave at every point, what the clinician is concerned in is simply some definite, accurate and easily applicable method of determining what is ordinarily spoken of as pulse force or maximum blood pressure.

It is to be depreciated that at the present time reports of blood pressure observations are appearing in different terms, so that many results seem conflicting. Some give figures of mean pressure, others of maximum, and others of minimum pressure. A single absolute standard for blood pressure nomenclature must be adopted to avoid this difficulty, and I would propose that the maximum blood pressure, as determined by the Riva Rocci principle, be accepted as a standard, and if further details be added that they be individually designated. This question will be more fully discussed elsewhere, but my reasons may be briefly summed up here as follows:

1. Because maximum readings correspond to what has previously been meant by the terms arterial tension and pulse force; that is, the pressure necessary to obliterate the pulse wave, thus to use the same terms for a different pulse quality must inevitably be confusing.

2. A maximum reading requires the least time.

3. It involves a simpler principle and technic, so that it may be safely intrusted as a routine to nurses or other attendants. This has been demonstrated in the wards of the Thomas Wilson Sanitarium and the Johns Hopkins Hospital.

4. It is the more accurate, depending on so definite a quality as obliteration of the pulse rather than the comparatively indefinite point of maximum oscillation of a needle or column of mercury.

5. It is the maximum pressure which is of practical and clinical value and which affords the safest index of actual vascular force. It is during the systole alone that we have the aggregate effect of the elements of circulation. During diastole we merely have a residual effect.

6. An instrument for these maximum determinations can be put in a form so simple and compact that it can become of accurate and reliable routine use in general practice.

I present this instrument because I have found it accurate and easy of application and because it can be made in a simple portable form, which may encourage a more general use of precise measurements of arterial tension.*

The value of blood pressure determination is already sufficiently evidenced by the general interest in the subject, but as yet their application has been almost entirely confined to scientific research in the larger hospitals of the country. This is, of course, a necessary beginning in the new field, for individual observation could be of slight comparative value without its significance had been demonstrated by accumulated evidence. Although those generalizations are a necessary antecedent of more extended use, the chief value of accurate determinations of arterial tension will not be compassed until they are applied in general usage to individual cases. This is true of any method. The results of its scientific application may be great, but while it remains inapplicable in practical usage its limitations are set. Collaborated blood pressure observations have already given us many new ideas concerning the various phases of arterial tension and have cleared many old ones, and as yet the work is only begun; but in a comparatively few years all conditions will have been studied and the deductions drawn, and if the estimation of arterial tension has not become an active, every-day working method in medical practice, its end will have been accomplished. Comparatively little is now being developed on temperature in disease, and yet the clinical estimation of pyrexia dates back but 35 years. But the thermometer will continue always to be one of the most important aids to the profession. And so the value of universal estimation of pulse tension must win general recognition and application. The time is when the practitioner is not satisfied with placing his hand on a flushed brow and "thinking" the patient is feverish, and the time must be when he will not be satisfied with thinking the pulse is stronger.

The pulse is more generally and often appealed to for information than any other one physical sign. Of the elements of the pulse the tension is the most valuable. Since the general introduction of time-recording instruments the rate has assumed the chief position of importance because it can be numerically determined. Ordinarily in critical cases we only ask for the pulse rate because the indefinite sense perception of force is too vague to be trustworthy, yet rate in these cases is chiefly of value as an indication of strength, for experience has taught that a rapid rate often accompanies a weak pulse, and vice versa; yet the fallacy of this generalization is but too often misleading, and it would seem but a poor makeshift to depend on the varying accompaniments of a condition when the condition itself may be determined. Pulse rate undoubtedly often affords a good index of pulse force, but a blood pressure reading is the pulse force. The use of a certain remedy in anemia would gain small credence to-day if cases were reported when the color improved after three days' treatment, while if the hemoglobin increased regularly in that time 40 per cent., it would certainly carry weight. Similarly it would seem almost negligent to *think* a certain treatment lowered the tension in a case of uremia or aneurism, or to give an infusion in shock and be content with *thinking* the pulse felt stronger. The time can not be far distant when operator and anesthetist will keep closer watch of difficult cases by blood pressure observations on the table, when routine blood pressure charts are kept as clinical aids to diagnosis and treatment in hospital wards, when careful case synopses contain blood pressure estimates, and when the general practitioner really *knows* the arterial tension of his patients.

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* This instrument has been put on the market by Messrs. Eimer and Amend, 205-211 Third Avenue, New York City, in two very satisfactory forms: One, with solid [illegible] manom[illegible]r for hospital and experimental use; the other, [illegible]eter in small portable leather [illegible] the pract[illegible]

Progress in medicine, as in the other component branches of advancing civilization, is not gradual and imperceptible, but is marked definitely by improvements and new departures from the old régime. It would seem that few individual medical advances would be more far reaching or more productive of real benefit than the substitution of precision for vagueness in the estimation of arterial tension.

FURTHER OBSERVATIONS ON INCREASED BLOOD COUNTS DUE TO HIGH ALTITUDE.[*]

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That altitude produces an increase in the number of red corpuscles in the blood is a principle very generally accepted. The work of a number of investigators appears to show that the increase is directly proportional to the altitude. At sea level we have, according to Laasche, a blood count of 4,974,000 cells which is by many considered normal.[†] At an altitude of 9,500 feet Egger found a count of 7,000,000 cells; while Viault, who worked in the Cordilleras of South America at an altitude of 14,400 feet, found the high count of 8,000,000 cells. All these counts refer to human subjects.

As a result of these and similar studies the principle of high blood counts in high altitudes is regularly found in our works on hematology, and is regularly taught in the medical schools. Further, more or less elaborate theories have been based on it to account for the beneficial effects ascribed to high altitudes. There appears to have been but little question as to whether the increase in the number of red corpuscles was permanent or merely temporary.

When our first investigations were undertaken, some two years ago, the above principle was naturally accepted; but, after a number of observations had been made, numerous remarkable exceptions were noted. How to explain these observations soon became the leading problem. From a number of blood counts which were made in order to test the accuracy of the altitude hypothesis it was found that in the case of persons resorting to a higher altitude for a short period of time that an increase in the number of red corpuscles usually resulted; but that cases residing regularly at high altitudes showed counts substantially normal. When common white rabbits were transferred to higher altitudes a similar increase followed. The increase was gradual and continued for several weeks, after which the number of cells began to decline. But these experiments were not of sufficient duration to determine whether the blood count would return to normal or remain permanently at a higher figure. The evidence, however, seemed to indicate a return to normal.

In our climatologic investigations it seemed desirable to have this problem definitely solved. For, if no permanent increase in the number of cells occurred then the beneficial effects ascribed to altitude must either be temporary or of a different character. In order to settle this point, at least in our own minds, our observations were continued; a number of animal experiments were also made to bear directly on this problem. The results of these observations and experiments are presented in this paper.

Among a considerable number of cases examined three bear more particularly on this problem and the data taken are therefore given in full.

Case 55 resides regularly in Albuquerque, but while he was spending the summer in a mountain resort, at an altitude of 7,000 feet, we were enabled to make a series of examinations of his blood. He was enjoying excellent health at the time. The period spent in the mountains was 48 days, and although not as long as could be desired, the decrease in the cell count followed the characteristic increase. The counts, together with other data, are embodied in Table 1:

TABLE 1.—BLOOD COUNTS OF SPECIAL CASES AT HIGH ALTITUDES.

Date.	Time.	Weight.	Sp. Gr.	Hemoglobin (per cent.).	Red Cells (per c.m.m.).	Colorless Cells (per c.m.m.).	Time in High Altitude (days).
Case 55..							
7/24/02	10:30	125	1.060	..	5,573,000	12,000	8
7/28/02	10:00	...	1.060	85	6,155,000	12,000	12
7/31/02	2:30	...	.....	..	6,431,000	12,000	15
9/ 4/02	3:00	...	.....	..	5,791,000	11,000	48
12/10/02	10:00	123	1.060	87	5,395,000	14,000	..
Case 75..							
9/20/02	3:00	150	1.061	84	5,093,000	6,000	4
1/27/02	11:30	...	1.061	..	5,382,000	10,000	11
10/ 3/02	11:30	...	.....	..	5,777,000	14,800	17
10/21/02	11:30	...	.....	..	5,928,000	14,800	35
10/31/02	11:30	...	1.062	78	6,280,000	13,000	45
11/20/02	10:00	...	1.063	88	5,591,000	6,000	65
12/11/02	3:45	155	1.061	82	5,218,000	6,000	86
Case 74..							
9/20/02	10:30	177	1.060	82	5,915,000	8,600	4
9/27/02	10:30	...	1.061	..	5,844,000	8,600	11
9/30/02	10:30	...	.....	..	5,564,000	7,400	14
10/ 6/02	11:00	...	.....	..	5,862,000	5,000	20
10/27/02	10:00	...	.....	..	6,271,000	15,000	41
11/21/02	10:00	...	.....	..	5,951,000	9,500	66
12/13/02	11:00	172	1.064	90	6,235,000	6,500	88
12/19/02	11:00	...	1.064	93	6,600,000	.....	94

It is seen that after staying in the mountains eight days the blood count was slightly above normal as indicated by previous examinations. It is also seen that a considerable rise in the number of corpuscles took place and that this occurred rapidly during the early part of his stay. Immediately after returning from the mountains the blood count shows a decrease to practically the original count.

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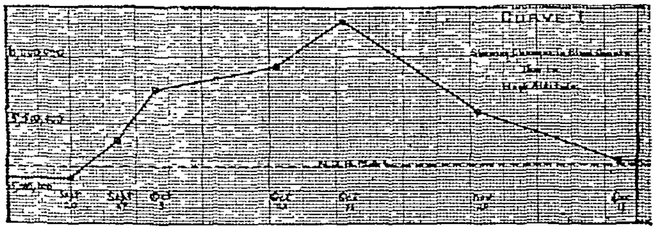
[*] For carrying out the researches embodied in this paper aid was received from the Elizabeth Thompson Science Fund, which is hereby gratefully acknowledged.

[†] In this paper 5,500,000 red corpuscles is assumed to be normal for man and 5,000,000 for woman.

Case 75 was a young man, 22 years of age, who came from the Mississippi valley at an altitude of 900 feet, to Albuquerque at 5,000 feet. The summer had been spent on a farm and the subject enjoyed excellent health. On entering the university as a student regular blood counts were made; the results are given in Table 1. It is seen that the counts increase regularly from 5,093,000 to a maximum of 6,280,000 cells, when a decrease set in and the blood returned practically to the first figure. The difference between the first and last counts, which is slight, can be readily accounted for by the seasonal variations due to temperature. It should, perhaps, be added that this case was particularly free from disturbing factors, which we have found enter largely in much of our work with human subjects. The relation between time spent at the higher altitudes and the number of red corpuscles is shown graphically by Curve 1.

To illustrate the above mentioned fact that external factors may retard, or perhaps even obliterate the effects of altitude, Case 74 is here introduced.

This is a male subject, 30 years of age, and in perfect health. The conditions attending this case are almost identical with those of No. 75. The summer, however, had been spent in recreation, his duties being assumed at about the time the blood counts were begun. These duties were of such a nature as to cause considerable mental anxiety. Undoubtedly this factor, with his resumption of work, had much to do in modifying the usual blood phenomena due to increased altitude. After several weeks the mental strain was largely removed, and, as is seen in Table 1, the characteristic increase followed; but this was after a period of gradual decrease. In other words, there was a decrease when there should have been an increase, and the latter occurred only after a considerable period of time. The case has evidently not yet run its complete course.



Curve 1.—Showing changes in blood count due to high altitude.

In order to meet the conditions of the problem more closely than could be done with human subjects, animal experiments were made. For this purpose four healthy white female rabbits were selected and blood counts made. They were then sent to Ellis' mountain resort (altitude 8,000 feet) and the blood examined after five or six days had elapsed. The animals were allowed to remain at the higher altitude for a period of seventy-two days, when they were returned to the laboratory and again examined. The final count was made after the animals had been kept at the laboratory for one month.

Since changes in physical conditions, such as the character of the food, the amount of floor space, etc., are apt to produce important changes in the blood and so obscure the true phenomena, especial care was exercised in carrying out this experiment. The rabbits were fed on alfalfa, wheat, bran mash and a few vegetables during the time they were under experimentation. The floor space was also kept constant and comprised about 50 square feet. The animals were kept in the open air with an abundance of sunlight. Adequate protection was also given them. The fact that they gained in weight continually while under experiment shows that they were well cared for. Certainly they appeared to be in perfect health.

So far as the writers are aware the only disturbing factor entering into the experiment was involved in the transportation. The greatest care was given them during this time, and it is not believed that the animals could have been materially influenced by it, as the cage was large and the time relatively short.

Rabbit 17 was injured before the end of the experiment, and this affected the counts so as to render them worthless; they are, therefore, excluded. The counts for the other three, together with other valuable data, are included in Table 2:

Table 2.—Blood Counts of Rabbits at High Altitudes.

Date.	Time.	Weight.	Sp. Gr.	Hemoglobin (per cent.).	Red Cells (per c.mm.).	Colorless Cells (per c.mm.).	Days in Mountains.	Days After Return to Albuquerque.
Rabbit 16.		Lbs.						
8/21/02	9:30	4½	1.056	78.0	6,666,000	4,000	....	....
8/28/02	3:00	....	......	....	7,742,000	13,000	5	....
11/ 8/02	1:00	5¼	1.060	86.0	6,671,000	8,500	72	....
12/ 5/02	1:30	6¼	1.058	86.0	6,786,000	2,500	....	27
Rabbit 18.								
8/21/02	1:45	6¼	1.057	73.0	5,849,000	9,000	....	....
8/29/02	10:30	....	......	....	5,875,000	14,000	6	....
11/ 8/02	3:30	7¼	1.058	85.0	7,760,000	7,500	72	....
12/ 6/02	3:30	8	1.056	84.0	7,391,000	4,000	....	28
Rabbit 19.								
8/21/02	3:00	3¼	1.058	73.0	6,022,000	10,000	....	....
8/29/02	9:20	....	......	....	6,929,000	11,000	6	....
11/ 8/02	11:00	5¼	1.061	80.0	6,835,000	7,000	72	....
12/ 4/02	2:45	5.6	1.060	81.0	6,702,000	6,500	....	26
Rabbit 24.		Gms						
11/29/02	1:30	2240	1.053	82.0	5,742,000	11,000	....	....
12/11/02	11:40	2470	1.058	86.0	6,083,000	7,000	....	19
Rabbit 25.								
11/29/02	3:00	2332	1.052	80.0	6,211,000	8,300	....	....
12/19/02	11:30	2500	1.057	78.0	6,249,000	7,500	....	20
Rabbit 26.								
11/29/02	4:00	2371	1.059	85.0	8,084,000	11,000	....	....
12/18/02	2:30	2672	1.059	91.0	8,716,000	7.000	....	19

It is observed in rabbits 16 and 19 that the blood counts were very nearly the same on returning as when sent to the mountains; that the intervening blood count was higher; and that the last count, after remaining for one month at the lower altitude, did not differ materially from the one made on returning from the mountains.

Rabbit 18 shows a comparatively low count before being sent to the mountains, while the two final counts are decidedly higher. It is probable that improvement in some physiologic condition occurred, and that this may account for the divergence. The final count is slightly lower than the one made when brought from the mountains, but the fall is not at all in proportion to the fall in altitude. If, then, we take the results as a whole, they agree very well with those shown in Curve 1.

A second experiment with rabbits was carried out, but this varied in a number of details. Three common rabbits were purchased in Las Vegas (altitude 6,500 feet) and sent to the laboratory in Albuquerque. It is seen that one transportation and one change of masters were thus avoided. The rabbits were sent by express and could not have been materially affected by the trip. They were received from Las Vegas in the evening and the examinations made on the following day. The rabbits were in good condition, but were not fat. The results of both examinations are given in Table 2.

In none of the rabbits is there a decrease in the final counts; two agree very well, while the third shows an increase. These data are in harmony with those of the previous experiment, and refute the supposition that high altitudes produce abnormally high blood counts.

To prove that subjects in high altitudes have a blood count substantially normal, it appeared desirable to make examinations of a number of cases who had resided at an increased elevation for varying periods of time. The mountain resort, Camp Whitcomb, at an altitude of 7,000 feet, furnished opportunities for obtaining a number of such cases. The results of these examinations appear in Table 3.

From the table it is seen that these cases do not vary decidedly from the normal. A larger number fall below than above, and this notwithstanding the fact that several must have been influenced by a temporary rise due to the increased elevation of 2,000 from Albuquerque to Camp Whitcomb.

TABLE 3.—BLOOD COUNTS OF CASES RESIDING AT HIGH ALTITUDES.

No. of Case.	Date.	Time.	Weight in Lbs.	Age.	Sex.	Condition of Subject.	Altitude.	Time in Albuquerque. Altitude 5000.	Time in Mountains.	Sp. Gr.	Hemoglobin, per cent.	Red Cells per c.mm.	Colorless Cells, per c.mm.	Red Cells. Above Normal.	Red Cells. Below Normal.
56	7/24/02	2:30	....	22	M	Normal.	7000	30 days	1 day	1.062	80.0	6,911,000	14,800	1,411,000	....
57	7/24/02	3:45	....	39	F	Normal.	7000	11 years	7 days	......	....	5,351,000	15,000	351,000	....
58	7/25/02	10:30	....	34	F	Tuberculous.	7000	1½ years	13 days	......	....	5,275,000	19,000	275,000	....
59	7/25/02	11:30	150	33	M	Tub. (no bacilli).	7000	35 days	21 days	1.062	85.0	5,679,000	11,000	179,000	....
60	7/25/02	4:00	175	47	M	Tub. (cured).	7000	8 years	1 day	1.060	....	5,186,000	12,000	....	314,000
61	7/26/02	11:45	106	42	F	Normal.	7000	18 years	1 year	1.058	....	4,440,000	9,000	....	560,000
62	7/26/02	3:00	125	26	F	Normal.	7000	35 days	22 days	1.062	....	4,770,000	13,000	....	230,000
63	7/27/02	10:30	140	45	M	Tuberculous.	7000	6 years	45 days	1.056	....	5,160,000	16,000	....	340,000
63	7/31/02	10:30	140	45	M	Tuberculous.	7000	6 years	49 days	......	....	5,130,000	10,000	....	370,000
64	7/27/02	4:20	125	25	M	Tuberculous.	7000	60 days	30 days	1.062	77.0	5,720,000	13,000	220,000	....
65	7/28/02	2:45	148	19	M	Normal.	7000	105 days	5 days	1.063	75.0	5,293,000	11,000	....	207,000
66	7/28/02	11:45	140	19	M	Normal.	7000	18 years	46 days	1.060	83.0	5,440,000	9,000	....	60,000
67	7/28/02	5:30	131	32	M	Normal.	7000	6 years	10 days	1.060	....	5,093,000	9,000	....	407,000
68	7/29/02	10:30	120	28	F	Normal.	7000	6 years	42 days	1.060	75.0	4,773,000	10,000	....	227,000
69	7/29/02	5:00	135	52	F	Normal.	7000	60 days	32 days	1.062	....	5,391,000	10,000	391,000	....
70	7/30/02	10:00	104	40	F	Normal.	7000	2 days	25 days	1.061	78.0	4,942,000	10,000	....	58,000
71	7/31/02	4:15	145	32	M	Normal.	7000	6 years	8 days	1.062	81.0	5,581,000	12,000	81,000	....
72	8/26/02	4:00	115	30	F	Normal.	8000	9 years	60 days	......	....	5,782,000	11,000	782,000	....
73	8/29/02	11:30	120	56	M	Normal.	8000	....	9 years	......	....	5,417,000	7,000	....	83,000

Several of the above cases require comment. Case 56 has been at the higher altitude only thirty days, and therefore had not had sufficient time to pass through the altitude phenomena and return to normal. Cases 57, 58, 59, 62, 64, 67 and 70 were also at the increased elevation during the periods varying from 8 to 30 days, and would likewise be affected by the temporary increase due to a change of altitude. Five of the above cases show blood counts above normal, as was to be expected. It may be mentioned that five of the total number of cases were tuberculous; two of which, however, showed no bacilli. Such cases frequently vary from the normal in their blood counts. They should, however, be affected by the altitude factor in the same way as healthy subjects. If, then, the cases be taken as a whole, they show a substantially normal condition, and support the view that high altitudes have no permanent effect on the number of red corpuscles.

The factor of temperature change has not yet been considered in this discussion. As has been indicated elsewhere,[1] this factor plays an important part in the altitude phenomena as related to the blood. It is there shown that a fall in temperature produces the same effect as an increase in altitude; also, that winter counts are, as a rule, higher than counts made in summer.

If the above data are viewed in the light of these results, it becomes evident why the rabbits taken from a higher altitude did not show a fall in the number of red corpuscles when transferred to lower levels. In both these experiments it happened that when the animals were taken to the lower altitude a considerable fall in the temperature took place; this made the temperature conditions nearly the same in both places, with probably a fall at the lower altitude. Likewise, in the examinations of human subjects recorded above, the temperature factor plays an important rôle. The counts in Table 3 were all made during the warm months of July and August, and therefore show figures lower than would have been obtained during the winter months. They are therefore lower than might have been expected from a consideration of the altitude principle as shown in Curve 1.

From the data presented here we may conclude that the increase in the number of red corpuscles due to an increase in altitude is temporary, and that after the lapse of several weeks the blood counts again become normal. It is believed that the temporary increase is due very largely to the change in the temperature factor, and not to the diminished barometric pressure, as is generally held.

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[1] Paper to appear in the American Journal of the Medical Sciences.

American Traveling Medical Schools.—After referring to the traveling post-graduate schools, which we have recently mentioned as being a feature in Germany, the *Medical Standard* says: "In America we already have hundreds of traveling medical 'schools.' Here the practitioner's school is the medical society, which is multiplying with astonishing rapidity. Few medical men are outside of the influence of one or more of these organizations. The county and district societies are frequently attended and addressed by our most distinguished physicians, who often seize these opportunities to demonstrate their clinical methods. In this manner the country practitioner is kept in close touch with the leaders in the profession."

A CASE OF BRAIN ABSCESS

DUE TO LATENT TYPHOID INFECTION; OPERATION; DEATH FROM CARDIAC COMPLICATION.*

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AND
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MEDICAL HISTORY AND DIAGNOSIS BY DR. M'CASKEY.

The following case was referred by Dr. G. M. LaSalle of Wabash, Ind., Sept. 20, 1902:

A. T., laborer, aged 44. His health had always been good up to the time of his present illness, excepting that three years ago he had his nose broken on the left side by a vicious sheep which butted him with its horns. He was not entirely unconscious, but was severely stunned and the nasal bones badly broken, but he apparently recovered from the injury without incident. He said that his present trouble began three months ago, but close questioning elicited the fact that there had been a variable amount of head pain for about five months, which was mostly in the right eye and over the right side of the head. This head pain, undoubtedly, was the initial symptom of the brain lesion which will be described, and gradually increased in severity, so that he had at different times to stop work for a few days because of it.

Three months ago his attention was first attracted to a tingling sensation in the left hand, which was quite persistent, and about the same time noticed that the fingers of the left hand were very weak and evidently somewhat contractured, as he said they were partially closed all the time and that he could not completely open them. This had undoubtedly been preceded by slight paretic weakness, as at that time he would frequently drop things that he was holding in the left hand if of any weight.

He continued at his work, that of straightening sheet iron with a heavy sledge, for about two weeks, when he became disabled and remained so up to the time of my examination. The left hand had grown progressively weaker, until one week prior to my examination, when the weakness increased very rapidly. At that time he had considerable use of this extremity and could raise the hand up over the head, but the paralysis had increased so rapidly during that week that the hand was entirely immobile, the patient being scarcely able to move the fingers. The left leg had also become decidedly weak, and at the date of examination was unable to sustain the weight of the body. Critical examination of the face showed that the motor power of the left side was distinctly less than that of the right, although it was not easily discernible, and was, in fact, very slight.

Four weeks before coming under observation he had a sudden discharge of what, from the description given, was apparently pus from the naso-pharynx. The quantity was quite large and was estimated at from four to five ounces, although the exact quantity was, of course, quite uncertain. This was followed by marked relief of pain, and several times since then there had been slight discharge of a similar material followed by some amelioration of head pain.

The left forearm was persistently flexed on the arm, but by gentle continuous pressure could be completely extended. There was very slight deviation of the tongue to the left; or more correctly speaking, he was unable to push it as far to the right as he could to the left. There was exaggerated knee-jerk and elbow jerk on the left side. The pupils were symmetrical, perhaps a little small, but responded promptly to both light and accommodation.

His hearing was not acute, the hearing distance for a watch being fifteen inches for the right and sixteen for the left, and there had also been double sided tinnitus for a year or more, but the impairment of hearing and "ringing in the ears" were both attributed by the patient, and perhaps correctly, to the deafening noise of his occupation.

The visual fields were perfectly normal in outline and the senses of smell and taste were unimpaired.

There was no optic neuritis, but a distinct increase in the vascularity in the retina on the left side as compared with right. This condition, falling short of optic neuritis, I have several times found, and in examination of some of these cases by oculists but little importance has been attached to it, but I believe that it is a phenomenon entitled to careful consideration. In this case there was every reason to believe that it was the result of the intracranial lesion.

An incident in the case worth noting was typical alopecia areata of about five years' duration.

The analysis of urine revealed nothing of importance. Blood examination showed 6,000 red cells with 90 per cent. of hemoglobin and 13,500 white cells. The increase in leucocytes was made up principally of neutrophiles.

Co-ordination of the eye muscles was perfectly normal, the muscles of mastication were equally strong on the left side as far as could be determined. The patient read ordinary type with either eye without difficulty.

The diagnosis of brain abscess was made, and operation advised and accepted. The patient was operated on September 27 by Dr. M. F. Porter, who, at my request, uncovered the brain cortex at the level of the arm center from just in front of the Rolandic fissure forward, the opening being about one by two inches. This area was selected because of the possible relationship of the injury of three years ago, the pain in right eye, the probable discharge of pus through the cribriform plate of the ethmoid bone, and the certain involvement of the motor zone, as it gave freer access for exploration of the parts thus indicated. The accompanying cut shows the location of the abscess as nearly as it can be determined from the operative procedure, which will be described by Dr. Porter.

Following the operation the patient progressed favorably, there being, as expected, an increase in the paralysis from the operative traumatism. About three or four days after the operation, the patient complained of a little oppression in the upper portion of the chest. His somewhat constrained position rendered necessary from the operative procedure would cause some discomfort, and not much stress was laid on the symptom, although I did examine the chest once with negative results. About 11:30 a. m., October 5, seven and three-quarter days after the operation, after finishing his dinner, he suddenly complained of feeling very ill, became pallid with labored breathing and tumultuous heart action, and almost immediately became unconscious. He was seen by Dr. Porter and myself within twenty or thirty minutes, at which time he had rallied somewhat, the pulse being small and irregular, but he had a dazed expression and the breathing and heart action were still labored, so much so in fact that the heart sounds could not be analyzed at all. A careful examination failed to show any signs of unusual brain disturbance. There was no increase of paralysis, the pupils were symmetrical and normal in size and reaction, the heart disturbance with resulting respiratory embarrassment being the only symptom, to which might be added, perhaps, the temporary unconsciousness and subsequent dazed condition, both of which were undoubtedly the result of an embarrassed heart.

No autopsy would be permitted, but death was due to an acute cardiac lesion very possibly related to the septic process of the brain, probably a septic endocarditis with cardiac atony from toxemia. An antemortem blood clot probably formed in the hea[illegible]nd perhaps had been forming for several days unrecognized. The clinical picture was that of sudden heart failure from such a cause. I have made autopsies in two cases in which death occurred under very similar circumstances; antemortem clots were present in both.

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* Read before the Northern Tri-State Medical Society, Butler, Ind., Jan. 20, 1903.

Examination of the pus obtained from the brain showed a profusion of rod organisms with the usual microscopic characteristics of pus. No other organisms were found. On careful cultural experiments the organisms showed all the characteristics of the Eberth bacillus, and bacteriologically could not be labeled anything else. No history of typhoid fever could be obtained, but it is well known that many cases of typhoid fever are very mild, and it is more than probable that the patient had been the victim of such an attack which passed under some other name. The typhoid fever organism is well known to be pyogenic in character and has been known in a number of instances to remain latent in the organisms for years and later become virulent with the production of local suppurative or other morbid processes.

The possible relation of the injury on the left side of the nose three years before the examination is a point worth considering. From the history given, the injury appeared to be exclusively to the left of the median line. It does not seem probable that there could have been any actual brain injury excepting by transmitted force. If the infection had been a streptococcus or some of the other more common pyogenic organisms, the possibility of the local infection traveling from the side of the injury to the brain would be more plausible. But it would certainly seem as though the infection must almost necessarily reach the corresponding side of the brain, rather than the opposite one if such a relation existed. The presence of the typhoid bacillus, furthermore, seems to exclude a local infection of this character. That there may have been some contusion of the brain from the injury which lowered the resistance of the brain tissue and made it a prey to the pyogenic processes of the organism which in some manner found its way there is quite possible. Unless such a latent injury can be assumed, and the history at the time of and following the injury does not give the slightest indication of such an injury, the case must be looked on as strictly one of the so-called idiopathic type developing from a latent typhoid infection of unknown date and origin, the latter being in either event sufficient cause for the abscess.

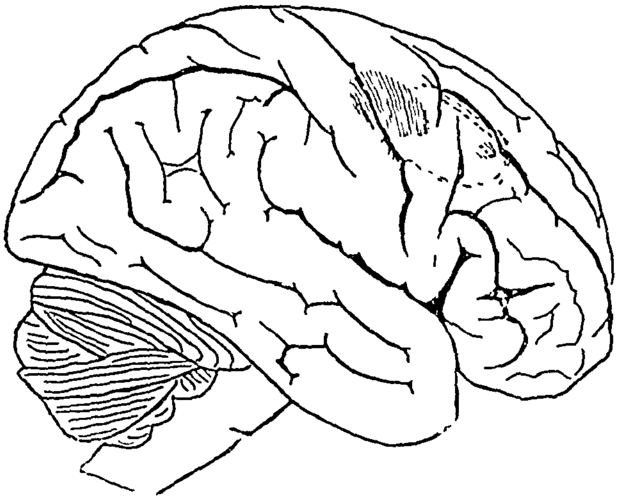

Diagram of right lateral surface. Large heavily shaded area indicates locations of abscess cavity. Small heavily shaded spot, a point at which pus was found in small quantities. Dotted line, area of brain uncovered by surgeon—about 1 by 2 inches.

OPERATION AND REMARKS BY DR. PORTER.

Mr. A. T. was operated on at the request of Dr. G. W. McCaskey, on Sept. 27, 1902, at St. Joseph's Hospital.

The scalp was prepared in the usual way. Dr. E. V. Sweringen anesthetized the patient, using ether. A horseshoe-shaped flap was turned down and a section of bone one by two inches removed by the use of the trephine, Gigli saw and De Vilbiss' instrument. A crucial incision in the dura was made and the flaps reflected. Nothing abnormal could be discovered by sight or touch A small trocar and canula inserted in various directions discovered nothing until a thrust was made in a downward and backward direction at the posterior extremity of the opening in the bone, when the point of the instrument appeared to have entered a cavity, whereupon the trocar was withdrawn and a few drops of pus flowed from the canula. Using the canula as a guide the opening was enlarged and a small soft rubber drain introduced. Thinking the amount of pus removed insufficient to account for all the trouble other areas were explored and we were finally rewarded by discovering a cavity not larger than a pea located at the anterior internal aspect of the uncovered area. This was drained by a strip of gauze. The posterior cavity was about an inch beneath the surface and the anterior one about one half or three-fourths of an inch beneath. All told I do not think the quantity of pus from both cavities would reach 2 drams. The bone was not replaced, the flap was turned back and sutured, leaving only enough opening for the drain. The operation was not followed by shock or any untoward symptom save a slight increase in paralysis such as was expected.

The unhappy ending of the case was, in my opinion, in no wise the result of the operation. This is not the first case in which the exact location of a subcortical lesion was first made known to me by exploratory puncture. A sudden change in the resistance offered to the progress of the instrument, even though slight, is easily appreciated. Had I been using a probe or a needle in this case I would have felt perfectly justified in enlarging the openings, for the sudden lack of resistance offered to the trocar was what first made me aware of the location of the cavities.

On another occasion[1] a subcortical tumor was located because of the increased impediment offered to the progress of the exploring needle by the capsule of the tumor. Exploration by this means is, if carefully done, almost without danger. One's anatomic knowledge should keep him from puncturing large vessels or the floor of the fourth ventricle. Vessels of lesser size may be avoided if, when the needle is arrested by their coats, it is slightly withdrawn and its direction slightly changed. It is to be regretted that no autopsy was allowed.

SHOCK PRODUCED BY GENERAL ANESTHESIA,

WITH RELATION TO DISTURBANCES OF THE BLOOD AND GASTROINTESTINAL TRACT.*

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CHICAGO.

Shock as a result of simple anesthesia in the absence of trauma, hemorrhage or fright has not been carefully worked out. The term "shock" is unscientific. It is the clinical expression for a group of symptoms, the result of failure of important functions of the body, as those of circulation, respiration, excretion and secretion, and general metabolism. A lowered bodily temperature is a more or less constant phenomenon. Shock is intimately connected with the nervous mechanism.

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[1] The Journal A. M. A., Jan. 25, 1902.

* Read before the Chicago Academy of Medicine, January, 1903, and Chicago Medical Society, March 4, 1903.

In studying shock from anesthesia it is not only essential to consider the specific toxin of the anesthetic used, but the resulting toxic bodies generated through the immediate or more remote influence of general anesthesia. Shock can not, therefore, be expressed in a single definition. The phenomena of shock are so complex that in experimental work on animals it is necessary to study each condition separately, and compile the associated facts obtained and compare them with clinical experience.

The present paper deals with (1) the consideration of the anesthetic as a cellular poison; (2) the disturbances of function as a result of the anesthesia; (3) the toxins that are evolved either from the direct effect of the anesthetic or the disturbances of certain functions of the body.

In experiments on dogs with chloroform and ether, we have not determined the direct toxic effect on cells, as this has been done by numerous observers. Sabaarth,[1] in 1866, reported 119 cases of death from chloroform anesthesia, only 48 of which were due to the toxic effects of chloroform. This led Nothnagel[2] to study the pathologic effects of chloroform and ether on the various cells of the body. Rabbits were chiefly used, and the anesthetics were employed by inhalation, by subcutaneous and intraperitoneal injections, and by direct introduction into the stomach. Doses of different size and at varying intervals were employed. The pathologic findings showed overwhelming evidence of the specific toxic effects of chloroform and ether on cells, whether the animal died from anesthesia or not. Waller's[3] research on isolated nerves showed that their electrical reaction is suspended, or ceases permanently, according to the percentage of chloroform used, and the time of exposure.

In experiments on animals I have frequently noticed that some animals would show evidences of shock more readily than others of the same species, and that even with the most trivial manipulations under anesthesia the animals would die during the same night, the following day or the second day after. They would show all the evidences of shock, as a fall in blood pressure, respiratory failure, lowered temperature, loss of sensation to a greater or less degree, and failure of the excretory organs. This led to the investigation of the question of shock from anesthesia without surgical operation.

METHODS OF OBSERVATION.

Dogs were selected, as they appear more resistant to the after-effects of anesthesia than rabbits and guinea-pigs. Chloroform and ether were used; sometimes they were combined or used alternately. The animal's temperature, pulse and respiration were observed before, during and after the anesthesia, and they were observed sometimes at intervals for forty-eight hours thereafter. The maximum blood pressure was determined, comparisons made, and changes in the blood serum were noted. The condition of the motility of the stomach and intestines was observed. A study of excretion and secretion was made. Where death occurred, a postmortem examination was made. Where shock was evident, the abdomen of some of the animals was opened under local anesthesia. The condition of the splanchnic circulation was determined by direct inspection before external factors brought about any changes, such as might be produced by air, room temperature and manipulations. The serum was secured in some immediately, and in other cases twenty-four hours after anesthesia, by the usual method of bleeding the animal in order to observe any changed condition and its toxic properties. The mucous membrane of the stomach and intestines was dissected out, and both mucosa and muscularis were chopped up separately, to determine the presence of the anesthetic used, by distillation and appropriate tests. The length of time of the anesthesia ranged from one to six hours. A distinction was noted between the immediate or primary effects and those that were remote or secondary.

The conclusions that can be drawn from the details of the experiments made on animals under chloroform or ether are that where shock is produced it does not materially differ from the shock that results from trauma. The most constant pathologic factor is failure of circulation, and this is especially expressed in splanchnic congestion. The failure of temperature and respiration has been considered to be the result of vascular failure, with the corresponding fall of blood pressure.

It will be seen, however, by referring to the Protocols 13 and 15 that the temperature fell several degrees after the injection of the serum, while the blood pressure did not always show a corresponding fall.

Wilson[4] holds that death following chloroform and ether anesthesia is always due to a failure of circulation, and this failure renders the nutrition of vital centers impossible. This would seem to imply that we are dealing with a question of time and degree of circulatory disturbance. White[5] echoes the universal clinical observation that anesthesia always adds to shock. But it is not always recognized that shock itself is often produced by the general effects of anesthesia without trauma, hemorrhage or other etiologic factor.

Kirk[6] has shown experimentally that irregularity of the heart and syncope occur in animals after the last drop of chloroform has left the blood; and it is well known that chloroform and ether may be found in the urine as long as a week after the anesthesia. Horsley[7] demonstrated that death arose from shock to the medullary centers, and that the question of dosage was more of time than amount. The evidences of vomiting, long-continued after anesthesia, are associated with severe circulatory depression, and not infrequently syncope. Ceccherelli[8] experimented on animals with chloroform to determine changes in body temperature, and Angelesco[9] carried out similar experiments with chloroform and ether. They found the fall in temperature was in direct relation to the disturbance of the circulation; that where blood pressure fell rapidly the temperature might fall from three to four degrees F. On the other hand, improved respiration and circulation caused an improvement in the temperature. Duplay and Hallion[10] demonstrated by experiments on dogs, with chloroform and ether, that there was always a fall of pressure under chloroform, also with ether, where the medullary centers were deeply narcotized. From the animals experimented on they concluded that if the failure of the circulation was the direct result of the respiratory failure, as a result of anesthesia, then we ought to expect prompt recovery from the syncope under artificial respiration. But this was not borne out in these experiments. Hill[11] concludes that chloroform paralyzes the splanchnic vasomotor tone, and, at the same time, diminishes the respiratory pump, and shock or fear, he claims, acts like chloroform by its tendency to abolish the compensatory mechanism for the hydrostatic effect of gravity. Hare[12] holds that in overdoses the heart and respiratory centers are paralyzed, and that in the usual proper doses chloroform produces death in the same manner as hemorrhage does, that is, by failure of the respiratory center, because it is deprived of blood, and a pulse failure because the heart has no blood to pump with.

Bland,[13] in comparing the effects of ether and chloroform, shows that chloroform invariably causes a fall in blood pressure, while ether does not except at the end of anesthesia and after narcosis. Hewett[14] claims that surgical shock will occur more readily under ether than chloroform.

The explanations that are usually given for the complex symptoms found in shock from anesthesia can not be explained by the simple failure of blood pressure and respiration, but there appear to be some direct toxic bodies formed that are found in the blood serum. The injection of the serum from animals that have shown evidences of shock produces many of the symptoms manifested in shock, which include loss of sensation, general malaise, marked fall in blood pressure, stertorous respiration and, what is generally more significant, rapid fall in blood pressure. (See protocols.)

Kast and Mester[15] are of the opinion that the blood contains the products of disturbed metabolism, for they found that after prolonged narcosis in healthy individuals a continued disturbance in metabolism of albuminous substances occurred, similar to that in phosphorous poisoning. Becker[16] of Bonn states that there is found in the majority of healthy persons acetonuria of varying duration after narcosis. Boyer[17] found cases of acetonuria with coma and death in from twenty-four to forty-eight hours after operation.

These observations would seem to prove that there are poisonous substances or toxins produced in the serum. The question, however, becomes more complicated when it is remembered that there is a deficiency in elimination, and therefore a retention of toxins. This may be inferred from the experiments of Galeazzi[18] and Grillo with methylene blue. They conclude that the anesthetic lessens the elimination of toxic substances, just as it lessens the elimination of methylene blue. Kemp[19] found that ether causes a rise in blood pressure in the carotid artery, followed by a fall, the urine becoming scant and containing albumin soon after the commencement of the fall in pressure. A similar phenomenon was observed after chloroform; the fall was more gradual, and secretion from the kidneys lessened as the circulation was depressed. Eisendrath[20] found cylindroids and other evidences of damage to the kidneys after anesthesia.

It is clearly evident that the toxicity of the blood may be increased through toxins elaborated by the direct effect of anesthesia, and by the retention of poisonous toxins which are normally excreted.

It is now well recognized that the blood serum normally has the power to neutralize to a greater or less degree toxins that circulate in the blood. One of the important properties of normal serum is its antiferment action, which is shown by the work of Firmi,[21] Roden[21] and Morganroth.[21] Landsteiner[21] shows that the normal blood weakens the fermentive action of pepsin, and Simniczki[22] follows up this work and demonstrates that blood serum has an antiferment action on papayotin; and also, that alcohol weakened or destroyed entirely this antiferment action of the blood.

The writer found that mixing chloroform and ether with normal blood serum lessened the antiferment action of the serum on trypsin in egg albumin. This was demonstrated by the following method: Blood serum was mixed with chloroform and ether and kept in an incubator, after which the narcotic was driven off from the serum, and the serum then mixed with one to two grains of pancreatin and a disk of egg albumin, which it digested completely, while the normal blood serum unmixed with chloroform and ether only softened the disk.

We must conclude that not only the chloroform or ether may possess this property, but an alteration in metabolism may generate a substance that counteracts the antiferment action of the blood.

OBSERVATIONS ON THE BLOOD SERUM.

We next consider the antiferment action of normal serum as compared with serum from animals that have shown symptoms of shock after anesthesia. In the following observations of the relative antiferment action of the sera, the Mett method was used. This consists of simply aspirating egg albumin into a capillary glass tube, 1 to 2 mm. in diameter, and allowing the albumin to coagulate in the tube at a temperature of 95 C. The tube is divided into short lengths and dropped into 2 to 5 cm. of the sera under investigation, with the addition of pancreatin or carica papaya. This is placed in an incubator at 37 C. After a period of twelve hours the tubes are taken out and the length of the undigested column of egg white is measured off by placing on a small glass millimeter scale under a low-power microscope. The difference between the length of the column of undigested white of egg and the length of the tube gives the degree of digestive power of the fluid. The sera into which the lengths of tubes with their albumin contents were dropped were prepared by taking from 2 to 10 c.c. of blood serum from dogs that had been anesthetized and mixing it with 15 decigrams of pancreatin or carica papaya, and this was controlled with normal sera prepared in the same way, the Mett method being then put into practice, as described above.

The following tables show the relative degree of inhibition of the sera to the action of the ferments of normal dog serum, as compared with the sera from animals that have been under chloroform or ether anesthesia.

In order to show the direct effects of chloroform and ether on normal blood serum, the following tables show the findings in a number of experiments performed. The anesthetic was mixed with normal serum and allowed to remain two to three hours, after which the anesthetic was driven off by heat at a temperature of 45 C., aided with a vacuum.

AFTER TREATING WITH CHLOROFORM.

Serum and Pancreatin Mixture.		Digested 10 Hours. Serum and Carica Papaya Mixture.	
5 c.c.	6.1 mm.	5 c.c.	4.1 mm.
2 c.c.	8.2 mm.	2 c.c.	7.2 mm.
3 c.c.	7.1 mm.	3 c.c.	4.3 mm.

AFTER TREATING WITH ETHER.

Serum and Pancreatin Mixture.		Digested 10 Hours. Serum and Carica Papaya Mixture.	
5 c.c.	5.1 mm.	5 c.c.	4.4 m.m.
3 c.c.	3.1 mm.	3 c.c.	5.6 mm.
4 c.c.	6.1 mm.	4 c.c.	5.8 mm.

NORMAL SERA.

5 c.c.	3.2 mm.	5 c.c.	2.4 mm.
2 c.c.	2.1 m.m.	5 c.c.	1.5 mm.
4 c.c.	2.2 mm.		

PANCREATIN, FIFTEEN DECIGRAMS.

Time Animal Was Under Anesthetic.		Time Animal Was Under Anesthetic.	
6 hours	9.0 mm.	1 hour	3.4 mm.
6 hours	8.4 mm.	1 hour	4.3 mm.
4 hours	7.4 mm.		

CARICA PAPAYA, FIFTEEN DECIGRAMS.

Time Animal Was Under Anesthetic.		Time Animal Was Under Anesthetic.	
6 hours	8.8 mm.	1 hour	4.7 mm.
6 hours	8.6 mm.	1 hour	4.1 mm.
4 hours	8.7 mm.		

The blood serum of these animals experimented on also showed a marked hemolytic effect. After shock was evident from anesthesia and the animal was bled, the blood frequently showed a tendency to lake, and this was also noticed where a considerable amount of serum was injected into an animal, the blood showing the same tendency. The following observations show this more definitely:

The serum from an animal that had been five hours under anesthesia, in shock, showed 15 per cent. hemoglobin. When fresh blood was added and centrifuged, the serum showed 50 per cent. hemoglobin.

Blood serum taken from a dog that had been six hours under anesthesia; hemolysis shown in the serum after standing eight hours; 4 c.c. of this serum added to 5 c.c. of fresh blood produced laking immediately in the test tube; .015 of blood in 4 c.c. of serum also produced laking. Hemoglobin in serum, 10 per cent.; after adding fresh blood and centrifuging, it was raised to 15 or 20 per cent.

Microscopic slide irrigated with shock serum and one drop of normal blood; placed in incubator; shadow corpuscles formed.

Agglutinization.—Serum from an animal that had been under anesthesia for three hours; one drop of blood under slide irrigated with serum showed immediate clumping. When blood from an animal six hours under anesthesia was used, the same condition was observed after the fourth and fifth dilutions.

Precipitins.—Immediate coagulations of blood have been frequently noted after prolonged anesthesia when the blood was withdrawn. One drop of normal blood added to 5 c.c. of sera showed coagulation within two minutes after having been placed in incubator. Equal parts of shock serum with normal blood showed immediate clotting of the whole mass.

The following condensed table represents the effect of serum taken from dogs which had been under the influence of chloroform or ether from one to six hours:

SERUM FROM CHLOROFORM.

	Hemolysis.	Agglutination.	Precipitins.
6 hours.......	Positive.	Positive.	Positive.
5 hours.......	Positive.	Positive.	Positive.
4 hours.......	Positive.	Positive.	Negative.
2 hours.......	Slight.	Plus minus.	Negative.
1 hour........	Slight.	Negative.	Negative.

ETHER.

	Hemolysis.	Agglutination.	Precipitins.
6 hours.......	Positive.	Positive.	Positive.
5 hours.......	Positive.	Positive.	Positive.
4 hours.......	Positive.	Positive.	Positive.
2 hours.......	Slight.	Negative.	Negative.
1 hour........	Not constant.	Negative.	Negative.

These experiments suggest the explanation of the cause of death in animals that have been in shock from the after-infection with saprophytic germs, which, without the shock, would have proven negative. Experiments made by the writer,[23] which have been previously published, show that the *Staphylococcus albus*, *Staphylococcus pyogenes aureus*, and the colon bacillus were equally prompt and positive in their toxic effects when injected after shock. The *Staphylococcus albus* and colon bacillus, when injected into normal animals used as controls in these experiments, gave negative results.

EFFECTS OF CHLOROFORM AND ETHER ON THE STOMACH AND INTESTINES.

We have still to consider another source of toxemia and irritation that follow the use of anesthetics when administered only for a short period. I refer to the disturbances that arise from the gastrointestinal tract following narcosis. That anesthesia from chloroform or ether interferes with the functions of the stomach and intestines is, I think, admitted by all clinicians, but just what disturbances occur is not always made clear. These disturbances include those of motility and secretion, as the direct result of the anesthesia and the splanchnic congestion.

The local effect of the anesthesia is shown in the following experiment:

The animal's esophagus was plugged to prevent the swallowing of chloroform or ether, and this was found to be quite as effective as tracheotomy for the purpose of administering the anesthetic through the tracheal opening. On examining the stomach through a fistula, previously produced and after gastric lavage, there was found an initial increase in the flow of hydrochloric acid, followed later by a diminished production of hydrochloric acid and ferments and the formation of a large quantity of mucus, which is always the product of irritation. Chloroform and ether were found in the wash water, they being recovered by distillation and the usual tests.

The fact that local irritation causes an initial rise in the formation of hydrochloric acid was first noted and published by the writer in 1894.[24] It was subsequently demonstrated by him in 1895[25] and in 1896,[26] and can be found by referring to the literature of his experiments with nitrate of silver, tannic acid, mustard and many other substances used in experimental acute and chronic gastritis. This initial rise in the formation of hydrochloric acid and pepsin was invariably followed by a decrease in their formation, and a corresponding increase in the formation of mucus, until subsequently no hydrochloric acid or ferments were secreted. It is, therefore, surprising to find that Pawlow[27] of St. Petersburg, in his recently published work, claims that these phenomena were first observed in his laboratory, and were the result of the observations of Sawrieu,[28] in 1900, which is six years after my observations, published both in this country and Europe.

It seemed desirable to determine whether the mucous membrane of the stomach and intestines contained ether or chloroform after anesthesia. To demonstrate this point, mucous membranes and muscle walls were examined separately. The stomach was washed out after a narcosis of two or three hours' duration, and the mucous membrane dissected from the muscle walls of both stomach and intestines. These were placed in separate receptacles and finely chopped. After thorough maceration, the products were distilled, and it was found that both muscle walls and mucous membranes contained a considerable amount of the anesthetics used. (The chloroform test is benzoisonitrile, C_7H_5N.) Ether was detected after distillation by the odor.

With both chloroform and ether, even after one hour's anesthesia, there was a distinct reaction for both found in distillation, but after two hours it was much more marked and distinct, and where six hours' anesthesia was used, the reaction was very much increased. In some of the experiments the mucous membrane was removed several hours after the effects of the anesthesia passed off, and still the anesthetic could be detected in the mucous membrane. The irritating effects of these would seem to account for the large amount of mucus produced, which is referred to above.

The writer has also found that constant irritation of the mucous membrane with substances, such as ether and mustard, if continued for any length of time, or if large enough in quantity, produced marked disturbances of the circulation. This was demonstrated in the experiments reported in my paper,[29] read before the American Gastro-Enterological Association, at Washington, D. C., in 1900. This is in conformity with the observations of irritations of mucous membrane that may affect the heart and circulation reflexly. Kionka[30] found that ether exercises an irritating action on all mucous membranes, even on those with which it has not been brought in direct contact. Guinard,[31] by experimental research in narcoses, found that any irritation of the intestines caused by reflex action arrested respiration and circulation. Guirni[32] observed that irritation, which may arise from mucous membranes affecting the pneumogastric and other nerve filaments, is more strikingly observed when the nasal mucous membrane is irritated, and may cause an inhibition of the heart's action. Rosenberg[33] suggested the application of 10 per cent. solution of cocain to prevent this irritation. It was suggested to the writer to use applications of cocain over the area of the stomach and intestines, with a view to blocking the irritation that might arise from the anesthetics.

Meyer and Prebrium,[34] in 1873, showed the reflex effect of gastric irritation on the heart, causing inhibition.

When it is remembered that vomiting and disturbance of the circulation are usually associated with anesthesia, and that the removal of the ether from the stomach by lavage will check the vomiting and frequently stimulate the depressed circulation, it is evident from both scientific and clinical observations that this reflex irritation is a very potent factor in the production of the symptoms of shock following anesthesia. This is strengthened by the observations of Brunton,[35] who found that chloroform taken internally produces vomiting, and that even though coma and death be averted, the irritations of the stomach and intestines continue and produce the evidences of circulatory depression analogous to shock.

It is therefore evident that the atony which is noticed clinically may have some relation to the degree or quantity of anesthetic that is found in the walls of the stomach. The anesthetic used and the resulting toxic condition may act similarly to the toxic effect of fatigue stuff. This, with the effect of the anesthetic on the nerve centers, producing splanchnic congestion, may account for the lack of motion in the stomach and intestines. This atony results in the accumulation of gases in the stomach, and gases that are found normally in the stomach will distend it when the tone of the muscle wall is diminished or lost. Experimentally, through a gastric fistula, with the pylorus and cardia tied off, I have found that after the stomach has been emptied of its gases, the formation of gas in the stomach continues, which could not have been the result of fermentation, but must have been due to the gases from the blood. The great distension that is sometimes noted soon after prolonged anesthesia produces considerable effect on the splanchnic circulation.

Meyer and Prebrium[35] observed that distension of the stomach caused a rise in blood pressure. The writer's observations, previously published, were that the initial rise was followed by a fall in blood pressure, especially if the distension was chronic or prolonged. The disturbance of the circulation, as the result of atony and distension, must constitute a very important factor in anesthesia, and as long as there is a disturbance of the splanchnic circulation we must expect a disturbance of the motor power of the stomach and intestines.

It must also be remembered that where there is a lack of motor power with retention the excretion of chloroform and ether into the stomach seems to increase the toxicity of the stomach contents. From this we would deduce the observation that chloroform and ether either form a new compound or have the power of dissolving out the toxic principles that are readily absorbed. The injection of the normal stomach contents does not produce such toxic effects up to 40 c.c.; whereas in atony of the stomach, especially after chloroform or ether anesthesia, the toxicity of the stomach contents is markedly increased. The increased bacterial growth and the formation of toxins in gastric atony have been repeatedly shown in the author's literature of the past eight or nine years.

SUMMARY.

The complex clinical picture of the after-effects of chloroform or ether anesthesia is made more clear by experimental research, from which we may deduce the following facts:

1. The circulatory disturbance is a direct result of the chloroform or ether acting on the vasomotor centers.
2. The prolonged effect of chloroform and ether on the splanchnic circulation results in congestion associated with fall in temperature. Temperature may fall without fall in blood pressure.
3. The direct effect of the toxins of chloroform and ether acting on cells, with disturbance of metabolism, may produce toxic products.
4. The resulting elaboration of toxins produces symptoms of "autointoxication," associated with the formation of hemolytic and agglutinating bodies, and precipitins.
5. Indirect toxic effects result from retention of toxic products through disturbances of elimination.
6. There is lessened resistance of the blood serum to normal excreted toxins.
7. There is lessened resistance of the blood serum to bacterial toxins.
8. There is diminished resistance to the development of saprophytic and pathogenic micro-organisms.
9. This may be partly explained by the changes observed in the sera, such as diminished antiferment properties, hemolysis, agglutination, precipitins, etc.
10. That reflex effects result, such as reflex irritation set up by the excretion of the anesthetic into the stomach and intestines.
11. As the result of atony there is the formation of toxins in the stomach and intestines through bacterial growth.
12. Atony of the stomach and intestines results in the accumulation of gases and interference with the circulation.
13. There is increased toxicity of the stomach contents in the presence of chloroform and ether.

PROTOCOLS.

EXPERIMENT 1.—Dog; fox terrier, mongrel; weight, 11 kilograms. Ether anesthesia, by inhalation. Rectal temperature, 39 C. Time, six hours. Maximum blood pressure obtained by the modification of a Riva-Rocci "tonometer," 130-140 mm. At the end of three hours temperature 36.1 C. Blood pressure, 90-95. At the end of four hours the rectal temperature was 35 and the blood pressure 70. At the end of five hours blood pressure is 65-70. The rectal temperature 35. Six hours, 60-70; rectal temperature, 34.8.

Anesthesia removed. Twenty-four hours after: Blood pressure, 110; rectal temperature 36.5. Animal bled from carotid; coagulation prompt.

EXPERIMENT 2.—Dog; curly, black mongrel; weight, 20 kilograms. Rectal temperature, 39 C. Ether anesthesia, by inhalation. Time, six hours Ether removed at intervals, and as soon as dog showed evidence of recovery, the anesthetic was again administered. After four hours, the animal showed marked depression. Rectal temperature, 36 C. Respirations weak. Anesthetic removed. After four hours and thirty minutes, slight movements, but no return of consciousness. Reflexes returned. After four hours and forty-five minutes, animal awoke. No activity. Rectal temperature, 35.8 C. After five hours and ten minutes, anesthetic administered. Rectal temperature 35.5.

C. Shallow respiration. Five hours and twenty minutes, anesthetic removed. Marked depression. Five hours and fifty minutes, anesthetic administered until sixth hour. Rectal temperature, 35.2 C. Respirations shallow; blanched surface; gums pale; rapid, weak pulse.

Animal put in warm place; twelve hours after the removal of anesthetic, rectal temperature was 36.5 C.

Clinical symptoms of "shock." Refuses to eat; will drink; very listless; extremities cold; weak, with occasional trembling. Again placed under ether. Carotid opened, and secured 850 c.c. of blood, which shows rapid coagulation.

Experiment 3.—Dog; curly, black; weight, 16.2 kilograms. Anesthesia, chloroform. Five hours. Temperature at the beginning was 38.3 C., by rectum. Blood pressure, 120. In one hour, temperature, 37.2. At the end of four hours temperature was 35. Anesthesia removed. Animal shows no sign of awakening. Four hours and thirty minutes after, temperature, 37. Chloroform was then used. Five hours, temperature 36. The animal was placed in a warm location. Twenty-four hours afterward temperature was 36.5. Refused to eat; marked depression; blood pressure, 90. The animal was bled; recovered 550 c.c. of blood. Coagulation prompt.

Experiment 4.—Dog; mongrel bull terrier. Ether. Weight, 18.5 kilograms. Blood pressure, 150. Temperature, 38.6, rectum. At the end of two hours, the blood pressure was 95 to 105. Temperature, 37. Four hours, blood pressure, 78; temperature, 36.1. Animal placed in warm place. Twelve hours after rectal temperature, 36.5; blood pressure, 90-95. Animal bled; recovered 380 c.c. Coagulation prompt.

Experiment 5.—Dog; black and white, mongrel; weight, 18 kilograms. Blood pressure, 140; temperature, 38.3. Chloroform. At the end of three hours, anesthetic removed; temperature 35.6; blood pressure, 90-100. Twelve hours afterward, temperature 37.5. Blood drawn, 500 c.c.

Experiment 6.—Dog, mongrel; weight, 17 kilograms. Blood pressure, 130. Temperature, 38. Ether anesthesia. At the end of two hours changed from ether to chloroform. Pressure, 100. Three hours, pressure, 80. Anesthetic removed. Twelve hours afterward, removed 600 c.c.

Experiment 7.—Dog. Chloroform anesthesia, two hours. Blood removed at once after the anesthesia. Recovered 650 c.c. Coagulation prompt.

Experiment 8.—Dog, mongrel pointer; weight, 12.5 kilograms Blood pressure, 130-140. Temperature, 38.5. At the end of four hours, blood pressure, 60-70. Anesthetic removed. Twenty-four hours, blood pressure 100-110; temperature, 37.2. Animal bled; 550 c.c. Coagulation prompt.

Experiment 9.—Dog, black setter; weight, 15 kilograms. Anesthesia, chloroform; two hours. Temperature, 38.5; at the end of two hours, 36. Removal of anesthesia one hour afterward; animal bled; 600 c.c Coagulation.

Experiment 10.—Dog, white and black mongrel; weight, 9.5 kilograms Temperature, 38. Animal under anesthesia three hours. Temperature, at the end of this time, 36.1. Twenty-four hours afterward temperature 37.2; 600 cubic centimeters.

Experiment 11.—Dog. Anesthesia, chloroform; two hours. Temperature, 38.4. At the end of four hours, temperature 35.5. Blood removed the following day. Coagulation.

Experiment 12.—Dog, black and tan; weight, 6.8 kilograms. Ether, one hour. Temperature at the beginning, 39, and at the end of one hour, 37 7. Removed blood five hours afterwards. Coagulation not prompt.

Experiment 13.—Dog; weight, 15 kilograms; temperature, 38. Normal blood pressure taken at 11:20. Injection of blood serum from animal that had been five hours under anesthesia. Blood was removed one hour after the end of anesthesia: Injected into jugular vein, 11:20, 25 c.c. serum; 11:30, 15 c.c. serum; 11:35, 20 c.c. serum; 11:45, 25 c.c. serum. At 12 o'clock the temperature was 36.1; 12:20, 35. No marked fall in blood pressure; 12:30, 33.4; tongue pale; surface cold; marked twitching; 1:15, temperature inside the tissues, 33.2. Blood withdrawn, 700 c.c. Coagulated at once.

Experiment 14.—Dog, mongrel pointer; weight, 17 kilograms; 4 p. m., blood pressure, 140-145. Kymographic tracings. Anesthesia, chloroform. Injected serum from dog, removed twenty-four hours after anesthesia, which had been continued for six hours. Twenty minutes after this injected 25 c.c. of serum. 4:30 p. m., 50 c.c. of serum injected. Blood pressure, 110; 25 c.c. injected; blood pressure, 80. At 6:05 p. m., 30 c.c. injected; pressure, 57-60. Chloroform anesthesia changed to ether; blood pressure rose 20 mm. Again dropped to 50. Anesthetic was withdrawn, aseptic dressings applied, and dog put in a warm place. Result, death in six hours.

Experiment 15.—Dog, black and white mongrel; weight, 17 kilograms. One grain of morphine injected at 10 a. m.; 10:45, ether anesthesia. Normal record. Injected into jugular serum taken from a dog twelve hours after anesthesia which had lasted four hours. Rectal temperature, 39; 11 a. m., injected 10 c c. of serum; 11:10, 20 c.c.; 11:20, 15 c.c.; 11:25, 10 c.c.; 11:30, 30 c.c.; 11:35, 30 c.c. Total amount of serum, 105 c.c. Temperature, 35.2. No marked fall in blood pressure Changed anesthesia to chloroform, with a marked fall in blood pressure.

Experiment 16.—Mongrel, placed under ether anesthesia; pressure, 140; kymographic tracings. Ether. Temperature, 41. Injected 90 c.c. serum from dog which had been under anesthesia for five hours. The serum had been removed the following day. Blood pressure fell 80 to 70; forty-five minutes, temperature 36 C. Coagulation marked, interfering with further blood pressure records. Anesthesia removed; animal placed in warm location; temperature following day, 37 C. After three days, animal still showed symptoms of shock. Died on the third day. Post-mortem revealed no evidence of infection. Cultures negative.

Experiment 17.—Small black and tan under chloroform. Blood pressure, 130. Serum used from a dog which had been under anesthesia five hours, and bled the following day; 25 c.c. of serum injected. Fifteen minutes, pressure fell to 115; twenty minutes, 110; thirty minutes, 95; in one hour, 25 c.c. serum injected. Blood pressure, 15 minutes, following the last injection, 65-70. Wide excursion. Anesthesia removed. Animal died the following day.

Experiment 18.—Mongrel bull. Ether anesthesia. Blood pressure, 150. Serum from an animal that had been under ether for four hours. The animal had been bled immediately after removal of anesthetic. Injections of 22 c.c., followed by another injection of 22 c.c. No effect on blood pressure, 20 c.c.; no effect on blood pressure, 20 c.c.; pressure, 100. In one hour, pressure 85. Anesthetic withdrawn, and animal recovered.

Experiment 19.—Dog, mongrel; weight, 15 kilograms; blood pressure, 130; temperature, 29 C. Serum used, removed the following day from an animal that had been three hours under anesthesia. 80 c.c. injected. After a period of fifteen minutes, pressure 90-100. One hour and fifteen minutes, pressure ranged from 90 to 100. Temperature, 38. Animal recovered. The following day the temperature, 39.4.

Experiment 20.—Dog, mongrel. Serum taken five hours after ether anesthesia, which had continued for two hours. Blood pressure, 135; after injection of 90 c.c., blood pressure, 100. Anesthesia changed to chloroform. Blood pressure, 90. Ether again administered, pressure 110. Ninety minutes, pressure 90-95. The following day the animal bled; removal of blood, 550 c.c.

Experiment 21.—Fox terrier; female. Temperature, 39.4. Injection of serum taken from dog twelve hours after two hours' anesthesia; 16 c.c. injected, with a fall of blood pressure, followed by a chill as soon as the anesthetic was removed. At the end of one hour temperature was 37.3; one and three-quarter hours after, 37.2. Animal placed near a warm room, and continued in a condition of shock, and died six hours afterwards.

Experiment 22.—Dog, yellow; temperature, 38.8. Injected serum from an animal six hours under anesthesia. Temperature, 38 3. Amount injected, 25 c.c. and 20 c.c. Temperature went down to 37.2. The following day rectal temperature 38.3. Animal listless; can not be aroused, and lips appear pale; marked loss of sensation. Second day, temperature 39.5. Animal depressed; marked loss of appetite. Fourth day, animal bled; shows rapid coagulation and laking.

THE HEMOLYTIC EFFECT, AGGLUTINATION AND PRECIPITINS OF BLOOD SERUM FROM ANIMALS AFTER PROLONGED ANESTHESIA.

EXPERIMENT 23.—Dog. After five hours' anesthesia blood was taken from the carotid; shock evident from low blood pressure; temperature 97; shallow respiration; collapse imminent fifteen minutes after the removal of anesthesia. Blood shows a tendency to lake, with almost immediate coagulation. Blood placed in refrigerator for twelve hours, obtained 110 c.c of serum; hemoglobin (Fleischl), 10 per cent. One measure of Fleischl (7.65) added to fresh blood centrifuged showed twenty to thirty per cent. hemoglobin. The addition of 5 c.c. to 1 c.c. of fresh blood hemolysis within five minutes well marked, with "ghosts" floating in the serum. One-half c.c. of fresh blood, with 5 c.c. of serum, diluted two volumes with normal salt, hemolysis shown within five minutes. Four c.c. of serum added to 5 c.c. of blood showed immediate laking.

EXPERIMENT 24.—Dog, female pointer; weight 18 kilograms. Five hours under chloroform. Anesthesia removed, and animal allowed to recover from the anesthesia. Five hours later blood removed, 160 c c. of serum obtained after standing eleven hours. Serum tinged, showing 8 to 10 per cent. hemoglobin. By adding fresh blood serum, 20 to 30 per cent. hemoglobin after centrifuging. One c.c. of fresh blood, 5 c.c. of blood serum, immediate laking; incubator five hours, marked hemolysis; hemoglobin (Fleischl) 100 per cent.

Microscopic slide with serum taken from dog under anesthesia, one drop of normal blood, showed shadow corpuscles.

EXPERIMENT 25.—Bull pup, female; weight 20 kilograms. Blood pressure taken with kymograph; injected 90 c.c. of blood serum taken from an animal that had been under anesthesia for five hours. This animal was placed under anesthesia for one hour only, and injected; no marked fall in blood pressure. At the end of one hour blood was withdrawn and obtained 80 c.c. of serum. One drop of normal blood with 5 c.c. of serum, showed hemolysis within five minutes. Equal quantities of blood and serum showed marked laking. One drop of normal blood irrigated under slide with serum placed in incubator showed shadow corpuscles. Blood serum, to which is added fresh blood (7.65 c.c.), increased the hemoglobin from 15 to 20 per cent. after centrifuge.

EXPERIMENT 26.—Dog. Under anesthesia two hours. Withdrew serum and blood, and after twelve hours serum clear. Adding one drop of normal blood does not produce any marked discoloration after centrifuging, only slight discoloration. Equal parts of normal blood serum produced slight laking. Irrigating one drop under microscope; after thirty minutes in incubator clumping is observed; no marked ghost or shadow corpuscle.

Serum taken from a dog that had been under chloroform for three hours; one drop of normal blood mixed with serum from an animal that had been under chloroform showed immediate clumping. Coagulation took place within five minutes, with 1 c.c. of blood added to 5 c.c. of serum

Animal six hours under anesthesia; ether used; serum obtained the following day. Added normal blood to such serum produced immediate coagulation. Adding one drop of normal blood produces immediate clumping. Fourth dilution with normal salt solution, 10 c.c.; added 1 c.c. of normal blood, coagulation with laking.

One drop of normal blood added to 5 c.c. of serum after four hours' anesthesia. Equal parts of blood with serum obtained during profound narcosis after four hours.

BIBLIOGRAPHY.

1. Sabaarth: Das Chloroform. Würzburg, 1866.
2. Nothnagel: Die fettige Degeneration der Organe bei Aether und Chloroformvergeftung. Berliner klin. Woch., 1866, iii, pp. 31-33.
3. Waller: Brain, London, 1895, vol. xviii, p. 210. Ibid, vol. xix, p. 43.
4. Wilson: Lancet, Sept. 11, 1897.
5. White: Lancet, Jan. 7, 1899.
6. Kirk: Lancet, Dec. 7, 1895.
7. Horsley: Proc. Royal Med. and Chir. Soc., London, 1895.
8. Ceccherelli: Il Policlinico, 1895, No. 17.
9. Angelescq: La Semaine Medicale, Paris, Dec. 14, 1902.
10. Duplay and Hallion: Arch. Generales de Med., August, 1900.
11. Hill: Brit. Med. Jour., April 17, 1897.
12. Hare: Johns Hopkins Hospital Bull., January, 1895, and Am. Jour. of Med. Sciences, 1894.
13. Bland: Beitrage zur klinische Chirurgie, vol. xxxi, p. 271.
14. Hewett: Lancet, Feb. 19, 1898.
15. Kast and Mester: Zeitschrift f. klin. Med., Berlin, vol xviii. 1895.
16. Becker: Virchow's Archives, Berlin, vol. cxl, No. 1.
17. Boyer: Boston Med. and Surg. Journal, July 11, 1895.
18. Galeazzi and Grillo: Il Policlinico, Sept. 15, 1899.
19. Kemp: New York Med. Jour., Nov. 18. 1899.
20. Eisendrath: Deut. Zeit. f. Chirurg., Leipzig, Bd. xl, Hft. 5 und 6, 1895.
21. Firmi, Roden, Morganroth and Landsteiner: Cited by Simniczky.
22. Simniczky: Prager Med. Woch., Sept. 11, 1902.
23. Turck: Proc. International Medical Congress, Paris, 1900, and Medical Record, Aug. 11, 1900. Again in Philadelphia Med. Jour., March 30, 1901. Again in Chicago Medical Recorder, June. 1902.
24. Turck: Proc. Internat. Med. Congress, Rome, 1894.
25. Turck: Wiener Med. Woch., Nos. 1 and 2, 1895. Therapeutic Gazette, 1895.
26. Turck: Medical News, April, 1896.
27. Pawlow: The Work of the Digestive Glands. Thompson's Translation, London, 1902.
28. Sawrieu: Inaug. Diss., Contribution to Physiology and Pathology of the Gastric Glands of the Dog. Quoted by Pawlow.
29. Turck: Proc. American Gastro-Enterological Association, 1900. Am. Therapist, November, 1900.
30. Klonka: Archiv f. klin. Chirurgie, Berlin, Bd. l, H. 2.
31. Guinard: Bull. Generale de Therapeutique, Paris, Nov. 15, 1894.
32. Guirni: La Semaine Medicale, Paris, Oct. 10, 1894.
33. Rosenberg: Berliner klin. Woch., Jan. 9, 1894.
34. Meyer and Prebrium: Studien zur Pathologie, July, 1871.
35. Brunton: Lancet, July 6, 1895.

ANTITOXIN AND THE PHARMACOPEIA.

PLEA FOR THE ADOPTION OF A TEST WHICH IN THE AUTHOR'S EXPERIENCE PRESENTS THE LEAST DIFFICULTIES.

WILLIAM R. HUBBERT, B S., M.D.
DETROIT.

The proposed admission into the Pharmacopeia of antitoxin for diphtheria in accordance with the resolutions of the committee appointed to confer on the subject, means, if finally admitted, the necessary adoption of a suitable standard for testing which shall be at once comprehensive, and yet so simple, to use the trite expression with reference to the introduction of tests into that most important work, one "that any intelligent pharmacist may be able to apply." While I am much in favor of the recognition by the Pharmacopeia which this most important biologic product rightly deserves, I am in favor of the adoption of the simplest test which shall show not only the number of units present in any bulb of serum, but one which can be performed within the shortest possible time in any pharmacy in the land and by a person not necessarily experienced in biological work.

There is so little known on this subject of testing antitoxin, outside of a few laboratories in the land, that it is necessary to describe in detail the methods used in testing before one can take up the consideration of the simplest method. Down to a comparatively recent time it was supposed that if a definite amount of serum had neutralized a hundred least fatal doses of toxin, which least fatal dose had been determined by injecting varying amounts of the filtered toxic solution in which the diphtheria germs had been grown, into 250 gram guinea-pigs, it was supposed that a like amount of the same antitoxin would always neutralize 100 least fatal doses of toxin from whatever source the toxin was obtained. Accordingly, Ehrlich defined a unit of antitoxin to be the least amount of antitoxin which would neutralize a hundred minimal fatal doses of diphtheria toxin. This definition remained the accepted one for some little time and either 10 or 100 m.f.d. were used in testing antitoxin the world over; but Ehrlich found by testing a number of different toxins obtained from different sources, either grown from the same or from different cultures, or using old toxins in comparison with new ones, that there was a vast discrepancy in the re-

such products as toxins, serums and vaccines. This standard toxin, put up in ounce bottles whose L+ had been definitely determined, could be furnished each laboratory in the country or could be procured by any pharmacist who wished it, and from it with a few guinea-pigs and simple apparatus for measuring doses, an estimate could be made of the antitoxic value of a given bulb of serum which would come within 5 per cent. of being correct. Such a test would, in my opinion, be the simplest that could be devised that would give any approach to accuracy in results, and all serums tested with it, no matter where manufactured, would correspond in antitoxic units and the product be uniform. But if the pharmacist had to procure a standard antitoxic unit and from this not only determine the L+ of his toxin, but also the value in Ehrlich units of the given serum, the difficulty would be thereby very greatly increased and the results correspondingly unreliable.

I make an appeal for the adoption of the above method of test, for I know from years of experience how difficult it is to get uniformity where the calculations are increased. Then, too, there is such a chance for individual error to creep in that any effort to lessen this factor ought to be given consideration by the committee. Then, again, we ought to adopt a system that is American instead of one that has been imported, if the American can be proved to be just as reliable. There is such a great variation in the antitoxic value of the different serums on the market that it seems to me some uniform method of test should be adopted. This laboratory with which I am connected is willing and anxious to adopt any system of test which the committee in its judgment may recommend.

In conclusion, allow me to state that I am in favor of the adoption of the Ehrlich standard unit by the committee, but in the practical working out of the scheme I urge the adoption of a standard toxin based on the standard unit, which standard shall be maintained in some laboratory, preferably a government laboratory, and that this standard toxin shall be supplied to all laboratories producing antitoxins, or to any pharmacist desiring to make tests. I urge this in the interests of a more uniform product and also on account of its simplicity.

SOME EXPERIENCES WITH THE *X*-RAY AS A THERAPEUTIC AGENT.

REPORT OF THE CURE OF A CASE OF ALVEOLAR MELANOTIC SARCOMA.*

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To Finsen belongs the credit of first studying in a scientific manner the therapeutic action of light. His remarkable results and earnest work have opened up a most promising field. The discovery of the Rœntgen rays, and the scientific study of these, with the Becquerel and violet rays, have further stimulated thought and research.

We now know that the spectrum we see is only about one-eighth of the real one, and that in the dark field there are numerous other rays which possess remarkable chemical and photographic reaction. What effects these will have in the cure of disease none can imagine, but certainly the effect of the Rœntgen ray in some hitherto incurable maladies gives reason for great hope.

It is not my purpose to go into the general discussion of the treatment of cancer by the *x*-rays. Many interesting articles on phototherapy have been published in our recent literature, but the whole work is so new that we can only glean from them the most general principles. It would be hardly profitable to review them at this time.

I will give a brief outline of my own observations in the effects of *x*-rays on malignant disease.

In the fall of 1901 I was consulted by a physician who was suffering with a post-peritoneal malignant growth. At his request, we took a skiagraph, which required a twenty-minute exposure. He returned a few days later, saying that he felt much better and that he believed the growth was smaller. Our examinations did not confirm this observation, but, at his request, six or seven applications were made at intervals of a week, and for a while he thought he was much better. The disease, however, advanced to a fatal termination.

In this case my confidence in the therapeutic value of the ray was so little that I did not pursue the treatment with any enthusiasm, but as I look back to it now, after further experience, I really believe that it did do some good, and that a more vigorous treatment might have yielded better results.

The case which I desire especially to report was so remarkable in its course and termination as to be for me an epoch in my professional life. No previous experience has produced so profound an impression. To see a rapid-growing sarcoma heal in a short time under any treatment is truly extraordinary. Such patients are doomed in spite of any known application of remedies. Here was a man grasped from certain death before my very eyes—can you wonder at the deep impression made?

The fortunate subject of this sketch was Jacob Saelwachter of Wadesville, Ind. He was 31 years of age and a farmer. He came to me Feb. 20, 1902. On the right cheek, just in front of the ear, was a black tumor protruding from the surface, one and a half inches in diameter There were no enlargements of the glands in the neck. Under cocain anesthesia, the growth was excised well out into healthy tissue. The wound was united with silkworm gut sutures. It never healed.

Evidences of return could be seen in two weeks, small black spots appearing about its edges, and about this time an enlargement appeared under the angle of the jaw, which grew with great rapidity.

March 22, under general anesthesia, I made a second operation, excising the old wound widely. The incision was continued to the neck, and I removed the tumor, which had extended deep down between the vessels to the vertebra. The sterno-cleido-mastoid muscle was infiltrated for more than an inch. The diseased portion was thoroughly excised. At various points in the bottom of the wound black places could be seen. These were curetted, only to reveal the greater depth of the infiltration. The operation had lasted nearly an hour, when I concluded the complete removal was impossible. The wound was packed with gauze. There was no infection, still it was soon evident that the morbid process was again advancing. The wound showed no disposition to heal, and the surrounding tissues were rapidly infiltrated.

On May 1, as a last resort, it was decided to try the *x*-ray. It was really a forlorn hope, for it seemed almost impossible to favorably affect a mass which was now hard and extended to great depth. The gaping wound was two inches deep, covered with sluggish granulations, and the sides infiltrated, involving almost the entire neck on that side.

Considering the gravity of the case, it was decided to push the treatment, even at the risk of causing some painful reaction, the danger of a burn having been fully explained to the patient.

The current was generated by a static electric machine. The tube was a "Gold Medal," No. 3572. It was high most of the time. At first the tube was placed at six inches from the patient, but later it was brought as near as three inches. The shoulder and face were protected by a lead mask. The first seance was ten minutes, but the time was increased to twenty, and later, thirty minutes. A few applications were made on alternate days, and after that were given daily. Occasionally the reaction was uncomfortably severe, and the treatment had to be suspended for a few days. At no time was there anything approaching a burn, nor was there any serious discomfort.

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* Read before the Mississippi Valley Medical Association, October, 1902.

No black spots appeared after the first exposure, and after the third there was apparent improvement, and the skin had entirely cicatrized in two weeks. The infiltration gradually faded away. The last place to be affected was just behind the angle of the jaw. It occurred to me that the bone might be protecting it. The position was so changed as to allow the rays to come from behind, after which the place soon softened and disappeared.

By the last of July there was no evidence of the disease except the cicatrix. The applications were made once a week for another month, and now we have him report once a month. The growth never occasioned severe pain, but there was a drawing, uncomfortable feeling. This disappeared as soon as the treatment was begun, but would always return if it were suspended for a few days.

There was another interesting feature worthy of mention. In adjusting the lead mask, he often steadied it with his hand, so that two fingers were exposed to the ray They became very red and shed their nails. This shows that the nutrition of the tissues is profoundly affected by it. The fingers, since guarded from exposure, are regaining their normal condition.

The tumor removed at the operation was hardened and examined by Dr. William R. Davidson, who made the diagnosis of alveolar melanotic sarcoma. A specimen was also sent to Dr. B. F. Cline of the Post-Graduate Medical School of New York, who confirmed the diagnosis.

We have now under treatment a number of cases, some of whom show improvements, but the time is too short to judge of the effects. Two of them have been entirely relieved from pain.

We had considerable trouble with our tubes, five in all; they would become too high when much used. Baking helped them sometimes, but not always.

Phototherapy opens up a very interesting field for investigation, which I will not here discuss, but briefly report a few studies we have made. It does not seem to me that theories can be of any great value while our information is so meager. Let us gather the facts first.

To me the most important question is whether or not the *x*-ray is germicidal in its action. The parasitic origin of cancer is not established, although the evidence lends some probability to it, and whether it is or not, the effect of the ray on germ life comes up in its application to a wide range of diseases. If we could kill germs in tissue without destroying it we would have a most potent remedy.

In conjunction with my associates, Drs. James Welborn and Leartus Owen, the following experiments were made:

EFFECTS OF X-RAYS ON BOUILLON CULTURES OF PYOGENIC GERMS IN TEST TUBES.

August 9—Three tubes of sterile bouillon marked 1, 2 and 3, inoculated from pus of suppurating wound.

August 10—Culture media turbid. Shows staphylococci and diplococci, with methylene blue.

August 11—Nos. 1 and 2 exposed to *x*-ray. Time, 10 minutes. Distance, 12 inches. Tubes 1′ and 2′ inoculated from Nos. 1 and 2.

August 12—Tubes 1′ and 2′ show growth of organisms. Tubes 1 and 2 exposed for second time to *x*-ray. Time, 10 minutes. Distance, 12 inches. Tubes 1″ and 2″ inoculated from 1 and 2.

August 13—Tubes 1″ and 2″ show growth of organisms. Tubes 1 and 2 exposed 20 minutes to *x*-ray. Tubes 1‴ and 2‴ inoculated from 1 and 2.

August 14—Tubes 1‴ and 2‴ show growth of same organism as the original tubes.

The glass of the tubes seems to obstruct the passage of the rays, giving a dark shadow with the fluoroscope. Hence, we concluded to expose cultures without the intervention of glass.

EXPERIMENTS CONTINUED WITH BOUILLON GELATIN MEDIA IN PETRI DISHES.

August 16—Three plates, 1, 2 and 3, inoculated from pus of carbuncle, showing staphylococci.

August 18—All three plates show extensive growth of the staphylococci and also a fungus.

Plates 1 and 2 exposed to *x*-ray for 30 minutes. Distance, 10 inches. Covers were removed from plates during exposure.

After exposure three culture tubes, 1′, 2′, 3′, were inoculated from plates 1, 2, 3.

August 19—Culture tubes 1′, 2′, 3′ all show cultures of organisms.

EXPERIMENTS WITH RABBITS.

Two rabbits inoculated in each hind leg with pus showing staphylococci and diplococci.

Localized abscess resulted at the site of each inoculation.

Rabbit 1, exposed to *x*-ray for one-half hour.

No change resulted in abscess, but rabbit died on second day.

September 29—Rabbit 2, exposed for one-half hour, the rays being directed on the right leg.

October 1—Rabbit in good condition. Infection the same. Exposed right leg one-half hour.

October 3—Abscesses are much diminished, but not more so in right leg than in left.

In conclusion I would again remind you that all our work in this line is new. Further experience will be required to determine the exact position of the *x*-ray as a curative agent, and the permanency of its effects. It will be very interesting to study the method of its action, and doubtless many improvements will be made.

In the meantime we have much to encourage us, for if only a small proportion of hitherto incurables are rescued by it, we will be well repaid for the trials so far made.

I can not close without the remark that while this treatment is still under investigation we should not forsake previous, well-established principles. Growths should be excised where accessible and all other established means of relief should be employed, and after that the *x*-ray.

But in all cases not amenable to other methods the *x*-ray should be given a trial.

MORPHIN AND COCAIN INTOXICATION.*

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A few years ago I had occasion to observe that the prevalence of the several drug habits, notably morphin and cocain, was on the increase, especially among that class of people found in the charity wards of the public hospitals.

The victim of one or the other of these drugs becomes such after a somewhat different path. Cocainism is more quickly acquired, cases being on record of cocain eaters in Calcutta who have raised their dose from 1 to 12 grains in a month's time. This, while it is exceptional in this country, is frequent in India and other tropical countries, where the habit is very prevalent. The doses may be enormously increased, and 30 to 40 grains a day is not uncommon. The habit is on the increase, the drug often being given by physicians as a cure for morphinism, and is also greatly used for its sustaining virtues in physical exertion.

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* Read before the Montgomery County Medical Society, Oct. 3, 1902.

Its irritating effects consist of a briskness of perception and removal of fatigue, but are very temporary, and unless the dose is soon renewed are quickly followed by depression. Later insomnia and anorexia are noted, followed by an increase of the temporary prostration, diarrhea, and fits of semi-consciousness may appear, and there is loss of the power of control. Later the face becomes sallow, eyes sunken and there are emaciation, impairment of the eliminating functions and loss of memory. The will becomes weakened to the point of imbecility and the delusion of persecution is often seen.

The morphinomaniac acquires his unenviable state after a longer period of drug taking than the cocain fiend. With his syringe and a case of tablets he is a familiar object possessed of a vice scarcely less than that of alcoholic drunkenness. He begins with feelings of satisfaction and perfect comfort, which continue as long as the drug is taken in sufficient amount. He is known by his disorderliness and is usually a clever and often an interesting person full of schemes which never materialize. There will be gradually weakening of the moral sense, depravity and indecency. As the necessity for increased doses becomes more urgent the disturbances of general health are manifest. He becomes restless, irritable, has disturbed sleep, deranged appetite and digestion; is sallow, emaciated, gray and prematurely aged and even a young person may appear wizened and haggard. He may die cut off by some chance malady, but often from extreme exhaustion. Allbutt says:

> The slavery of coca is worse than that of morphia, it is more destructive of mind and body and harder to put aside. The morphinist still retains some desire to defeat his enemy and is filled with gratitude when the cure is complete. The cocainist is so reduced in intelligence that he neither desires emancipation nor feels any thrill of joy when released. Hence the prognosis in cocainism is worse.

That the changes taking place in the human organism as the result of the constant use of these drugs would be fertile ground for the propagation of criminal ideas can not be doubted. During the past summer I was in communication with a number of superintendents of police and judges of police courts in the large cities in regard to the relation these drug habits bear to the prevalence of crime. Their replies as to the increase of the habits and some of the estimates and statements made are interesting and somewhat startling, and surely indicate that these two drugs have a greater hold on certain classes of people than most of us are aware. Superintendent Muth of Allegheny, Pa., writes:

> In my experience with the criminal classes running through many years, the opium habit furnishes an incentive to more crime than any vice to which unfortunate humanity can be addicted. Also that opium increases crime and is the real cause of at least four-fifths of all the offenses committed.

The fact exists that the majority of people of the criminal class who have been most successful in their work have begun as youths, and they also become addicted to a drug habit early in their career if at all.

Crimes committed under drug intoxication are often such as require cunning, boldness and treachery. He has a courage and will he would not possess were he not under such influence, and he also exhibits a recklessness and "don't-care" feeling that carries him deeper in his work than if his mind were normal. This may cause him to commit grave offenses, but it is usually the smaller crimes, as larceny, assault and battery, etc., that are committed under drug influence. Often small thefts are done, not for the sake of the theft itself, but for the purpose of obtaining money to buy more "dope."

The association of drug habits with chronic alcoholism varies. Probably more often than not they coexist, but cases are frequent where after the drug habit is established the taking of alcoholics is discontinued. The victim often begins taking a drug by putting it in beer or whisky. One judge says: "One hundred per cent. more crimes are committed by cocain fiends than by persons who are addicted to the alcoholic habit." Quoting again from Superintendent Muth, he says:

> I am aware that some writers on crime and its causes attribute the criminal impulse to "alcoholic drinks," to ignorance and to hereditary tendencies. While all these are the causes of many shocking crimes, yet, if complete statistics were gathered they would undoubtedly show that the opium habit is the greatest incentive in the commission of crimes that require cunning, boldness and treachery. In nine cases out of ten the shoplifters are slaves to this habit, and it is only while under the influence of the drug that they can do any skillful work.

We see often cases of drug habit among the well-to-do and wealthy classes, but it is among the lower classes, and especially the prostitute, where it is, I might say, epidemic. It is the negro and the lower class of white prostitutes who take these drugs as a steady diet, and it is estimated that 80 per cent. of these people use morphin or cocain in some form or other.

In a recent article in the *Medical Record,* Perry speaks of the degeneration of the southern negro, assigning as causes the venereal diseases, tuberculosis and insanity. This latter, he says, has increased in the last forty years twenty fold, while the negro population has little more than doubled. This, he believes, is only a small part hereditary insanity, but is due to a removal of the healthy country life and congregation in cities, and in conclusion he gives the drug habits due credit for their work, and says they are greatly on the increase.

Where and how easily are these drugs obtained? In almost every city that cunning, slick individual, the Chinese, operates his opium den, and those who desire a smoke can find ample opportunity, and opium outfits are also frequently found in houses of ill-fame, where if one inmate smokes they all do. The ease with which morphin and cocain can be purchased from the druggist without a physician's prescription is appalling. Some druggists in the "tenderloin districts" rely largely on these sales to keep up their volume of business, and some have even said they could not exist if it were not for the sale of cocain. They keep it put up in 10 and 25 cent packages, and all the user has to do is to ask for 10 cents worth of "coke" and he gets it, and the all-night stores in these districts do a flourishing business in this commodity. The sales of morphin and cocain in small quantities has been very much on the increase the past three years, and those who once become users will, in the majority of cases, continue, and the number who use them constantly is daily increasing. Usually these sales are not even registered, as is required in many states when poisons are sold, but are dispensed as any nonpoisonous drug. I can not give the druggist all the censure, but some physicians and many quacks must take due credit for hasty or thoughtless dispensing or prescribing.

That existing laws are not enforced is undoubtedly true, but it is also true that many existing laws on this subject are not sufficiently broad. A recent enactment as to the sale of cocain in Iowa provides:

> No one, by himself, clerk, employe or agent, shall either directly or indirectly sell or give away any cocain or preparation containing cocain except on the written prescription of a registered physician for medical purposes. And no such prescription shall be refilled except on the written order of a physician.

It is this latter clause as to the refilling of a prescription that gives to the physician and the physician only the entire control.

I bring these few facts to your attention, not because of the facts themselves, but with the hope that before long there will be some united effort of the medical profession to control the indiscriminate sale of those drugs that are so antagonistic to the physical welfare of humanity.

1224 W. Third Street.

A NOTE ON THE VALUE OF AUSCULTATORY-RESONANCE AND AUSCULTATORY-PERCUSSION AS AIDS IN DIAGNOSIS.

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The purpose of this note is to bring more generally before the profession the art of auscultatory-percussion and auscultatory-resonance. Auscultation and percussion, together with palpation and inspection, have long been the foundations of diagnostic structure, but even with foundations laid we frequently build no higher than the first story because of inaccuracies of interpretation or for the reason that the draught of our plans misleads us. To be able accurately to map out the normal viscera of the body on its surface is a great achievement, but under pathologic conditions the task becomes more difficult and one is not infrequently baffled outright in the attempt. An opportunity to observe the remarkable results to be obtained by a combination of auscultation and percussion was recently afforded in the clinic of Dr. S. H. Habershon, physician to the out-patient department of the Brompton Hospital for Diseases of the Chest, London. Dr. Habershon has made use of the methods for a considerable time to great advantage, and he is entitled to the credit of bringing them to the high degree of perfection they have now attained. Personal experience with the methods has thoroughly convinced me of their value, and it affords me pleasure to commend them to the profession and to place credit to the tireless worker who has developed them.

Auscultatory-resonance was evolved from auscultatory-percussion, and the latter term is sometimes loosely applied to it. It is assumed that diagnosticians generally are familiar with the method of auscultatory-percussion, which consists in placing the stethoscope over the area of the viscus to be outlined and percussing lightly with the finger tip in converging lines toward its margins. Each organ gives forth, as soon as the percussing finger reaches its limits, a tone that is characteristic and of the same quality all over the surface area of the organ, depending in quality and intensity on the size and density of the organ.

If, now, one substitutes for the percussing finger a vibrating tuning fork it will be observed that a musical tone is transmitted to the ear through the stethoscope. This tone varies in intensity, quality and character with the size and density of the subjacent organ. If a stethoscope be placed over the area of the liver on the anterior wall of the thorax and the stem of a vibrating fork be placed lightly on the skin in the same area, there will be heard a note of definite quality that remains the same so long as the fork does not progress beyond the liver borders, but which diminishes slightly in intensity the further it is moved from the bell of the stethoscope. When the fork is moved beyond the liver margin, up or down, the tone suddenly changes entirely in quality and intensity. So with every viscus. Each organ transmits a characteristic tone of a definite quality and intensity, depending on the form, size and density of that organ. A musical ear is not essential, though it must be confessed that one so gifted will be able to appreciate finer gradations of tone.

LUNGS.

To apply the method, for purposes of illustration, to the outlining and examination of the lungs, let us proceed as follows: Select a tuning fork having a handle conveniently long and that is pitched to C or A, preferably the latter (435 vibrations). Place the bell of the stethoscope over the right lung anteriorly, as at O in Figure 1, set the fork in vibration and rest the handle lightly but firmly on the skin outside the lung area and progress rapidly, with short intervals, in a straight line toward O. When the margin of the lung is reached the musical tone that reaches the ear is heard suddenly to alter in quality and intensity, and from a muffled, distant character, it becomes resonant, clear and close to the ear. At whatever point the line of the advancing fork crosses lung margin the same characteristic tone is heard. With these manipulations the pressure of stethoscope and fork should be uniform, or as nearly so as possible, avoiding firm pressure one moment and light pressure the next. In this manner the boundaries of the lung may be made out and outlined with pencil on the skin. As the fork approaches the lung across the liver area the lung tone will become apparent so soon as the lowest margin is reached, modified slightly in intensity owing to dense liver beneath, but true in quality.

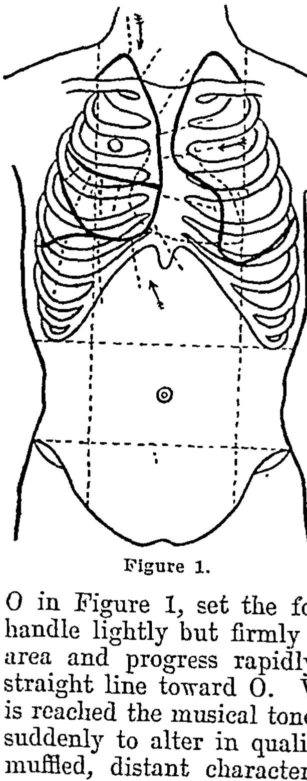


Figure 1.

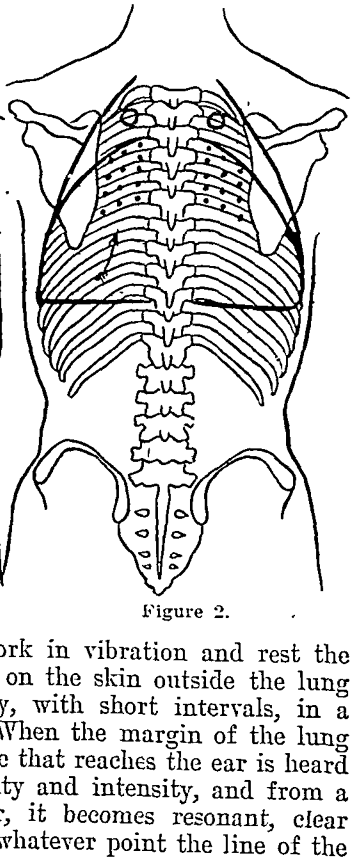


Figure 2.

If the stethoscope be held at O it will be possible accurately to outline the cleft between upper and middle lobes of the lung by proceeding in a manner similar to that detailed above, shown also in Figure 1. The lung as a whole has a definite, characteristic resonance and each lobe has also a tone of its own depending on the difference in size between them. The line of demarkation between the lobes is to be made out equally well at the back, Figure 2. The borders of the left lung may be sketched in the same manner, and it is interesting to observe how well one may map out the portion excavated for the heart. If a portion of lung is consolidated or contains a cavity the affected area will give an altered note, a consolidated lobe yielding a tone similar to that of the liver, while a cavity gives forth a peculiar loud resonance, close to the ear, corresponding to the "amphoric" breath sound. Pleural effusions and mediastinal growths may be made out with great precision.

The loudness of tone heard when stethoscope and fork are placed over the same rib or over the sternum may sometimes lead one into error, but practice will diminish the chances of going astray. It is to be remembered that to obtain best results the stethoscope always should be placed over the viscus to be outlined and the fork brought toward it; unwise is it to attempt to outline by progressing away from an organ or to determine on the margin of a contiguous organ in such manner. Take each viscus separately.

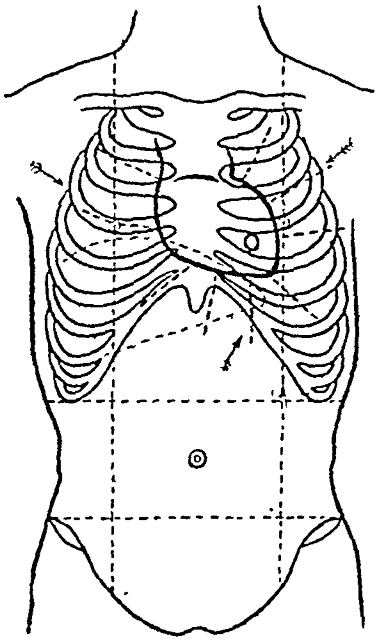


Figure 3.

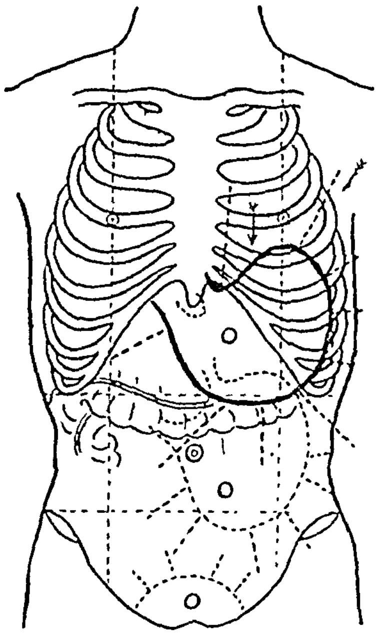


Figure 4.

HEART.

To outline the heart we proceed in practically the same manner; the apex beat is located, the stethoscope placed over any convenient portion of the heart area and vibrating fork made to approach in converging, stellar lines, Figure 3. It will become apparent that the line of separation between liver and heart is very well marked, determinable without difficulty and may be verified later by outlining the liver. It is affirmed that in some instances it is possible to make out the septum of the heart by this method, but the writer has succeeded, as he thought, in one instance only, where there existed a marked concentric hypertrophy. Where dulness in the fifth right intercostal space, parasternal line, points to fluid in the pericardium and where the triangular area of precordial dulness indicates effusion, this method is of great value in determining definitely thereon, since by means of it we are able accurately to map out the dulness and check over the results of ordinary percussion. It also is available in those cases of aneurism "with symptoms," aneurisms of the second portion of the aorta which are often difficult to make out.

LIVER.

Auscultatory-resonance and auscultatory-percussion are very valuable in determining the outlines of the liver, Figure 5. Given a case where the lower liver dulness is obliterated because of a peritoneal cavity distended with gas. Percuss downward over the thorax in the usual manner until dulness is reached, place the stethoscope over the dull area and proceed as indicated in the figure.

In several instances one has been able to verify findings at autopsy where during life the border could be made out by no other means. When enlargements of the gall bladder exist they become apparent often when conditions do not permit of their discovery otherwise. No matter how obese the patient the method is applicable. Only recently the spleen was accurately outlined in a patient weighing 230 pounds in whom it was impossible either to palpate the organ or to elicit dulness by ordinary percussion. Generally speaking the outlines obtained by auscultatory-resonance coincide nearly with the areas of deep dulness.

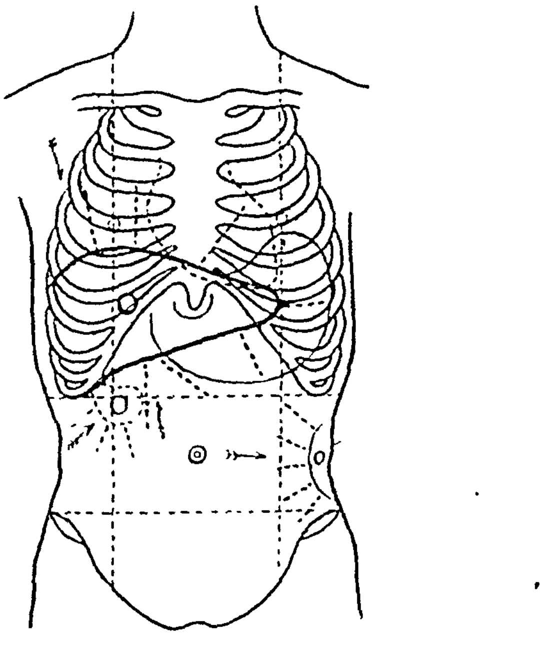


Figure 5.

STOMACH.

With regard to the stomach, it may be said that the methods already described will settle many perplexing points. The stomach gives out resonance peculiar to itself, contrasting sharply with the tones of heart, liver, spleen and colon. When the stomach is of normal size and in normal position the greater curvature may be outlined readily (Fig. 4), but when the organ is dilated or prolapsed or when these conditions coexist the method serves to best advantage. I have been able to verify results in such cases by dilating the stomach with air and by the use of the diaphane, when it became apparent that the slight deviations from the contours already traced were the result, not of error in the method, but rather of further displacement of the organ by the air or water introduced. The method has availed frequently in post-operative cases where there existed a suspicion of a full and dilated stomach, a condition to be dreaded, and one has been able to distinguish between such a status and a dilated colon. It is such cases that require nice decisions on the part of the physician since so much depends on proper therapeutic measures.

OTHER USES.

The existence of small amounts of intraperitoneal effusion may be demonstrated, as shown in Figure 5.

Areas of fibrinous exudate in the abdomen, tumors, distended bladder. pericecal inflammatory masses, aneurisms and splenic enlargements yield their outlines to auscultatory-resonance. Of its value in the topography of the kidneys I have not had opportunity to convince myself. Each method of precision has its limitations, but by a systematic use of all of them we may arrive at conclusions. Auscultatory-resonance or percussion is not intended to supplant any of the older methods. It should be used to check over results obtained by ordinary procedure and as an extra aid in the unravelling of knotty skeins of evidence.

A conscientious investigation of their merits will convince one that their practice is not esoteric, not a fad, but a legitimate and valuable aid to diagnosis.

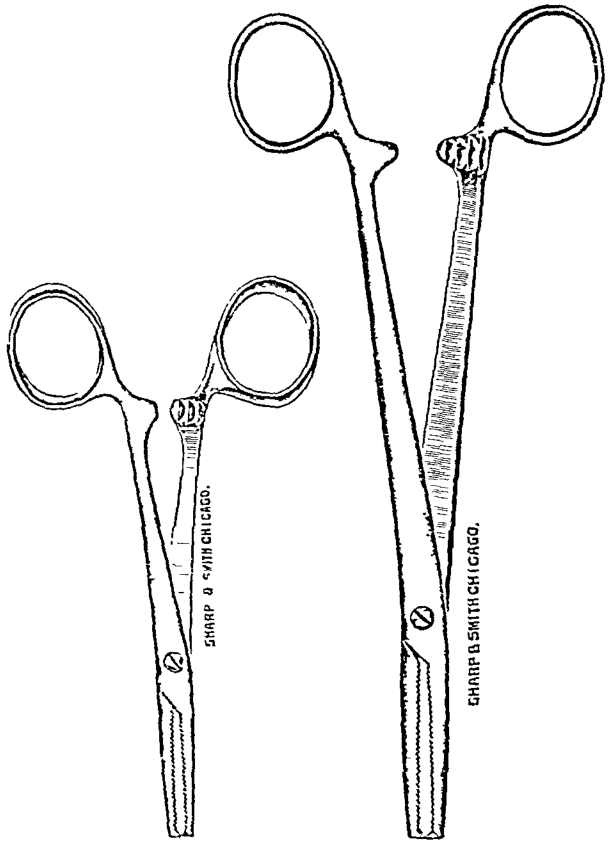
New Instruments.

A NEW HEMOSTATIC FORCEPS.

WELLER VAN HOOK, M.D.

CHICAGO.

It is rare to find a hemostatic forceps, as supplied in the ordinary instrument shops, which will last through more than a dozen ordinary operations without extensive repair. The selection of the proper instrument is frequently impossible because most of the instrument dealers carry in stock only the poorest constructed instruments, made by large factories in Germany. The models selected by these manufacturers are frequently such as have many excellent points, but, owing to failure in some minor particular, the instrument soon deteriorates.



I have had an artery forceps made which seems to combine a number of useful qualities. The forceps are made in two sizes. The dimensions of the smaller size are the following: total length, 5¼ inches; distance from lock to point, 1¾ inches; distance from lock to proximal end, 3½ inches. The dimensions of the larger forceps are: total length, 7¼ inches; distance from lock to point, 2 inches; distance from lock to proximal end, 5¼ inches.

No single new feature is introduced into the design of these forceps, but it is believed that the combination of old points of construction will make these instruments more satisfactory and durable than those commonly found on the market. The forceps are provided with mouse-teethed extremities and serrated jaws. After the plan of Doyen, they are made to meet first at the points, the jaws coming together gradually from before backward as increasing pressure is applied on the handles. Sufficient elasticity of the steel is provided to enable one to get the advantage of this principle. The branches are made sufficiently heavy, so that the shearing strain will not readily wear them out. The catches are unusually deeply grooved, preventing their readily slipping apart. The branches are so set that they lock firmly on the first notch. The rings are beveled, so that one may easily apply the rather firm pressure necessary to close the strong instrument. It will be noted that the length of the jaws in proportion to the length of the handles is short. This serves two purposes: it gives the operator greater leverage; and second, it gives greater strength to this part of the forceps, where so frequently lightness of material and length of jaw cause the forceps to twist and the ends of the instrument to turn over like a crossbill.

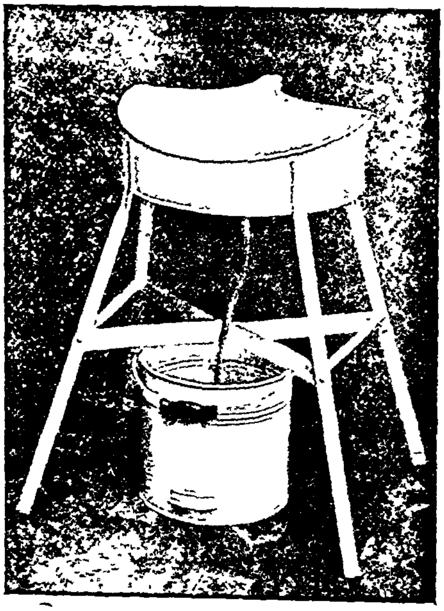
A most important point about these forceps is the return to the old-fashioned screw lock. The screw is made especially large to resist the shearing strain. This lock has not only the advantage of being very much firmer, but has the advantage of being adjustable for wear. The writer uses this lock for scissors also for the same reason. The objection that the forceps can not be taken apart for cleaning is trivial, since boiling in sodium carbonate (ordinary sal soda) will remove the materials which usually constitute the dirt.

AN IRRIGATING STAND.

WALTER E. M. RANCHOUS, M.D.

COLUMBUS, OHIO.

The accompanying illustration shows an irrigating stand of use to the venereal specialist and also to the general practitioner who has much to do with the irrigating treatment of gonorrhea in the male. It will enable the physician to get conveniently near his patient and irrigate without soiling the clothes of either party, since there is no splashing of the returning fluid other than that which is the receiving basin will accommodate.



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SATURDAY, MAY 2, 1903.

THE JOURNAL, THE GENERAL PRACTITIONER AND MEDICAL PROGRESS.

From time to time The Journal receives letters from various parts of the country in which the writers point out that in their opinion The Journal "fails to meet the needs of the general practitioner." It has been complained that "the articles are mainly on subjects of interest only to the specialist"; that the papers read at the annual meetings "are way beyond the average man" in certain respects; that those who endeavor to teach the profession by writing articles "obscure their ideas by coining new words" or by using terms not found in dictionaries hardly a year old.

It is not to be understood that these views are those held by even a majority of the readers of The Journal who express themselves in regard to their impressions of its usefulness. These views are, however, heard sufficiently often to merit some notice. They seem to represent the feelings of a certain well-meaning and earnest group of men in the profession whose sincerity can not be doubted and whose wants it must be the aim of every representative medical journal to fulfill according to the best of its ability and resources. We believe, however, that any journal would fail in this undertaking if it did not give prominent and full attention to those parts of the large subject of medicine in which progress is being made. The immediate fruitage of much newly-won knowledge depends in large measure on the widest possible diffusion of that knowledge and of the detailed investigations that have led up to it. Of all existing agencies for the dissemination of results of medical research the large weekly medical journals are the most influential because reaching the largest and most diversified circle of readers at the most frequent intervals. It stands to reason that of the great mass of material thus presented there must be a great deal that seems strange and devoid of direct benefit to the man who is absorbed by the exacting and laborious details of general practice with little leisure for careful thought and study. And there are also in every vocation a certain number of men, fortunately a small number, who really are annoyed by the unrest and uncertainty incident to progress. They prefer the dogmatic style of statement, which makes things so perfectly plain because it is assumed that everything is settled definitely and permanently. This mental attitude is hard to overcome and new truths make little or no impression on that sort of men. It is not intended to say that the dissatisfied readers of The Journal belong to this unfortunate class, the existence of which can not be denied, however. In the early days of bacteriology a great deal was said in protest against the rapid change of views in regard to many diseases, their causes and their treatment, and ridicule was bestowed freely on the germ theory. A good deal of unwillingness to accept freely the general teachings of bacteriology still exists in the minds of many respected practitioners who graduated before the days of the practical use of the microscope and the laboratory. And naturally many of these men are wholly unprepared to give sympathetic and interested hearing to the most recent ideas and theories in regard to the complex problems of immunity and cytotoxic action. And so it must also be in the other departments of medical science. The little modicum of knowledge imparted by the medical college years ago in the case of many, perhaps the majority, did not furnish sufficient basis for intelligent general comprehension of the rapid growth that has been and is taking place in medicine. Physiology as taught to-day would hardly be recognized as physiology by those who listened to a set of lectures or two twenty years ago and then dropped their interest in the subject. Since then physical chemistry, physiologic chemistry and pharmacology have developed. Corresponding changes are taking place in many of the clinical branches. Hence there need be no wonder if much of the material in the columns of the medical journals of to-day seems incomprehensible to some.

This condition of affairs will probably always obtain so long as the practice of the art of medicine is so conducted as to lead one further and further away from the fundamental and underlying sciences. More than ever does the medical practitioner need post-graduate study—medical journals, books, medical societies, and post-graduate courses are some of the sources at which he must seek inspiration to maintain his interest in medical progress. The time is ripe for the establishment by our best medical schools and universities of courses for graduates. Medical men must remember that certain truths in medicine as well as elsewhere have in them great powers for growth and fruitfulness, and that the growth must be watched closely lest one fails to recognize its effects and broadening significance. Furthermore, that progressive development also must result in such advances in instruction that the medical graduate of to-day starts out with better preparation for the future and with greater advantages than those of us of the past can be said to enjoy. Certainly this is as it should be.

For the reason that the medical journals of the day must aim to be fully abreast with the advancing waves of progress, words are frequently used that can not be found in "dictionaries hardly a year old" because dictionaries do not regulate the progress of science. As new phenomena are discovered new names become necessary. It is frequently said and with truth that nowadays text-books are antiquated when published, so rapidly does knowledge in many branches accumulate. But when all has been said that there is to say in favor of progress, of development, of the new in medical sciences, the fact remains that simplicity and uniformity of nomenclature are most highly desirable at the same time as it must be acknowledged that they are, from the very nature of things, exceedingly difficult to secure. We believe, too, that the protests against the writers who "obscure their ideas by coining new words" in many cases are fully justified. Medical writers are prone to forget that in medical writing it is ever a golden rule to clothe the ideas in the simplest form, "to say all he has to say in the fewest possible words and the plainest words possible or his readers will misunderstand them." Nothing is gained by the employment of strange words of Greek or Latin derivation when plain English can be used just as well. The constant aim should be to state so clearly what one has to say that there can be no danger, so far as the language used is concerned, of going over the heads of the largest class of the readers of our weekly journals, namely the general practitioner, who most needs the instruction and information it is hoped to convey. Medical as much as any other writers should try more to adapt themselves to the needs of the average reader. It is plain that by so doing they will increase the usefulness of their efforts and the influence of the medical press. When new and strange terms have to be used an explanatory remark might be added that will make their meaning absolutely clear. In our efforts to increase medical knowledge let us not lose sight of the duty to try to make that knowledge easily understood by as many as possible.

THE MICRO-ORGANISM OF SMALLPOX.

Elsewhere in this issue we print a report of the communication made by Professor Councilman to the Boston Society of Medical Sciences, in which he announces that the organism of smallpox has been established definitely to be a protozoan with the various cycles of development peculiar to some of that class of micro-organisms, more particularly the microsporidia. It is not stated by our reporter that the organism has been cultivated outside of the body, and the report does not appear quite clear as to the demonstration of the organisms in the blood of smallpox patients, or of animals experimented on before the appearance of the eruption; consequently, it is not yet possible to form any definite idea as to whether or not the means of diagnosis of smallpox before the appearance of the eruption has been furnished, though Professor Calkin's remarks, as published, suggest this.

The manner of entrance of the organism into the body, the route or routes by which it is carried to the local but disseminated lesions of the skin elsewhere and the various stages of development that it passes through during this complicated process remain to be explained. It is to be remembered that the conclusion of Professor Councilman that the cause of smallpox and vaccinia is a microsporidium is in accord with the interpretations of other and earlier observers of certain interesting bodies found within the cells in vaccinia and in the cutaneous lesions of smallpox. From time to time we have referred in these columns to the significance of the so-called Guarniari's bodies that can be studied in the lesions of vaccinia of the rabbit's cornea, and also to Fuchs' recent work on the "Sporidium vaccinale." It will be recalled that Wasielevski demonstrated that the rabbit's cornea could be inoculated successfully with vaccinia from one animal to another through no less than forty-nine generations, and in all the lesions occurred the peculiar intracellular bodies just referred to. He found, further, that when vaccine material was filtered through bacteria-proof filters the characteristic lesions would not develop on inoculation of rabbits' corneæ with the filtrate. From these facts he concluded that most likely the so-called vaccine bodies were the cause of vaccinia.

The results obtained by the Boston investigators seem to extend and confirm the conclusions of Wasielevski and others, and we trust that the announcement just made means that a decided step forward has been made in the study of smallpox. The complete publication of the work carried on in Boston during the last two or three years will be awaited with interest, and any attempt at critical consideration of the conclusions drawn by Professor Councilman and his coadjutors necessarily must be based on a thorough study of their report.

INTRACELLULAR TOXINS AND THEIR RELATION TO IMMUNITY.

During recent years workers in bacteriology have been largely occupied with the study of the soluble products of bacteria and with their action on the animal body. In view of the brilliant results which followed the discovery and investigation of the soluble toxins of the tetanus and diphtheria bacilli, it was natural to seek similar poisons in connection with the other pathogenic bacteria with the hope of also obtaining specific antitoxic agents to combat them. However, it soon became apparent that many bacteria did not exert their injurious effects through the agency of soluble toxins, and efforts to obtain curative sera by injections of fluid cultures have met with complete failure in the case of most pathogenic bacteria.

More recently the bacterial cell has again claimed more attention, and when the required technic shall have been worked out, it is not too much to hope that results of great importance will be arrived at. Vaughan[1] and his pupils have already contributed valuable results in studies of bacterial cells, and Vaughan has devised some very useful technical methods. They have found the dead cells of each of the pathogenic and non-pathogenic bacteria studied to be poisonous to rabbits and guinea-pigs. The intracellular toxin of a non-pathogenic germ may be even more potent than that of a highly infectious one. Vaughan concludes that the intensity of the infectious properties of a micro-organism is not always measured by the potency of its toxin, but rather depends on the conditions for its growth in the animal body being favorable. He does not think that the intracellular toxins exist as such in the cells, but are atomic groups or side chains of the complex molecule. They can be detached from the cell substance only by the action of agents which break up the complex molecule.

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[1] Trans. of the Assoc. of Amer. Phys., 1902, xvii, 243.

Macfadyen and Rowland,[2] in the Jenner Institute of Preventive Medicine, London, have been making some very interesting studies of the biologic properties of the intracellular constituents of the typhoid bacillus. They have elaborated a very ingenious technic for obtaining a "typhoid plasma" from typhoid bacilli as near like the living fluid of typhoid bacilli as possible. The bacteria are obtained in a pure state, and rendered brittle at the temperature of liquid air, when they are triturated without the addition of any foreign substance and the fluid contents of the cells allowed to escape. If such intracellular juices of the typhoid bacillus are injected into the monkey, a serum is obtained which possesses both antibacterial and antitoxic properties. Such a serum is curative and preventive as regards the typhoid bacillus and also the intracellular toxin present in the same organism. If these results are confirmed, it will be most important to know whether the intracellular juices of other bacteria, especially of those which do not produce soluble toxins, will give rise to bactericidal and antitoxic substances when injected into suitable animals.

EDUCATION AGAINST TUBERCULOSIS.

The methods adopted by the Phipps Institute for Tuberculosis in Philadelphia deserve the attention of those who are interested in the treatment of poor consumptives and in the prevention of the spread of tuberculosis in our large cities. It is needless to say this work represents one of the most humanitarian purposes that a philanthropist could set before him and merits emulation on the part of those who are in a position to lessen human suffering by direct means. The Phipps Institute methods are not claimed to be original, though they contain some very practical original suggestions. On the contrary, one of the great merits of the system employed is the conservative eclecticism that characterizes it. The most famous institutions for the treatment of tuberculosis, in this country and abroad, have been visited or studied, with the idea of selecting what appeared most commendable in their various characteristic features.

The treatment of the patients is practically limited to the application of the principle that abundant fresh air and a plentiful supply of nutritious food represent the essentials of rational therapy for tuberculosis. If these can be secured, drugs may be almost entirely dispensed with. It is frankly recognized that for poor tuberculosis patients an abundance of nutritious food is not always easy to secure. Part of the income of the large fund provided by the generosity of Mr. Phipps is applied, then, to the provision of the most highly nutritious food easily available and that does not require much care in its preparation. Consumptives who declare that they are too poor to pay for proper food are given daily twelve eggs and three quarts of milk. These are delivered at their residences. The amount of milk is later increased to five quarts, if the patient is able to take that amount with benefit. The usual advice is to take the eggs as nearly raw as possible. Beside the dozen of eggs and three quarts of milk, one full meat meal is insisted on as a necessary part of the daily diet.

With regard to fresh air, patients are advised that the coldest outdoor air is not likely to prove injurious, and that there is more danger for those associated with him in a closed warm room than in a cold open one. The windows of sleeping apartments are to be left constantly open in all weather. If arrangements can be made to that effect, the patient is advised to spend six to eight hours per day reclining in a steamer chair on the roof of his dwelling house, or, if this is not possible, on a porch or in a bay window with the windows open.

Such directions are more suitable to Philadelphia, where many people live in their own houses, than to cities where apartment houses are more frequent. In a word, the regulations in force in sanitariums for the treatment of tuberculosis in this country and in Europe are modified to suit the patients' environment. Consumptives are warned of the danger of going into crowds and against riding in crowded cars, where they may acquire secondary infections.

At each visit to the dispensary, patients are warned with regard to the dangers of spreading tuberculosis, are questioned as to their habits, and are drilled in the taking of precautions that lessen the risks of infection for others. It is always made clear to them that the taking of such precautions is also helpful to themselves, by avoiding the possibility of personal reinfection. The care of the sputum is especially insisted on and minute directions with regard to its disposal frequently repeated. Patients are warned that their clothing may readily carry quantities of tubercle bacilli, and they are shown the necessity for scrupulous cleanliness. The clothes of tuberculosis patients are gathered at suitable intervals and thoroughly sterilized.

It would seem that practically all of the important problems in the prevention of the spread of tuberculosis in large cities are thus deliberately faced and at least an attempt at their solution made.

The educative influence of such an institution on the masses can scarcely be exaggerated. From the very beginning the important lesson is taught that not drugs but fresh air and food are the remedies for tuberculosis. This feature promises to do more to lessen the nostrum evil, with its unfortunate sequelæ, especially in tuberculosis, than any other remedial measure that has been suggested. Well-directed charity and rational instruction seem to vie with each other for first place in the methods thus introduced. We shall hope to hear of great benefit secured by the very practical system thus initiated.

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[2] Brit. Med. Jour., March 28, 1903, 757.

THE PREVENTION OF RABIES.

It is said that in the last ten years 91 persons have died from hydrophobia in Chicago. Many other parts of the United States appear to have been afflicted with this disease quite as extensively, and there is no indication that in the last decade rabies has become any less frequent in the country at large. It must be confessed that the horror in which this disease is held by the popular imagination is probably fully warranted by all that is known of its clinical manifestations. We fancy there are few ways of leaving this world that one would choose less willingly than an attack of hydrophobia.

There is unqestionably less excuse for the continued existence of this disease in the heart of our crowded American cities than for that of many other forms of infectious disease. It is well known that the simple enforcement of existing regulations regarding the muzzling of dogs would be sufficient to stamp out the infection in all the denser centers of population. The remarkable experience of Great Britain in the matter of dog-muzzling is often referred to, but, in view of existing conditions, it can not be given too great or too frequent publicity. The official reports of Great Britain show the following relation between cases of rabies and the enforcement of muzzling:

YEAR.	CASES.
1887	217
1888	160
1889	312

The alarm caused by this increase led to the adoption of muzzling, with the following result:

YEAR.	CASES.
1890	129
1891	79
1892	38

The muzzling ordinance was then relaxed owing to misguided opposition, with the result of increasing the number of cases:

YEAR.	CASES.
1893	93
1894	248
1895	672

This rapid increase caused a revulsion of feeling and brought about a reversion to the former restriction:

YEAR.	CASES.
1896	438
1897	151
1898	17
1899	9
1900	0

An experiment so frequently repeated and confirmed possesses convincing weight and deserves to be taken into serious consideration by all municipalities in which a dog-muzzling ordinance now exists, but has been allowed to lapse into desuetude. It is worthy of note that the argument embodied in the statistics just quoted has been deemed cogent even in England where, as is well known, the sentimentality of antivivisectionists and other philozoists has in the past proved powerful enough to cripple scientific research and interfere in other ways with the real welfare of both man and the lower animals. Since it is plain that enforced muzzling will speedily eradicate hydrophobia from any given locality, there seems to be good ground for urging the general adoption and persistent enforcement of this measure. This should be urged in season and out of season by those interested in safeguarding the public welfare.

At a recent meeting of the Chicago Medical Society, where this question was discussed, one of the speakers expressed skepticism regarding the value of the Pasteur method of treatment of hydrophobia. It is not clear on what grounds this incredulity is based, since the evidence in favor of the beneficial results achieved by this treatment is almost, if not quite, as massive as that in favor of the antitoxin treatment of diphtheria. The statistics given out by the authorities of the Pasteur Institute at Paris for a series of sixteen years, from 1886 to 1901, show that out of 25,986 persons treated during this period there were only 112 deaths, or a mortality of 0.43 per cent. A large proportion of these persons had been bitten either (1) by an animal demonstrated by subsequent experimental inoculation to have been rabid, or (2) by one pronounced rabid by a competent veterinarian. The last annual report published by the Pasteur Institute[1] shows that in 1901 there were treated 171 persons belonging to the first category and 785 to the second, all others for that year numbering 362. The total number of deaths for this year was only 5. No deaths occurred among persons in the first category, and but four among those in the second, a total mortality percentage for these two groups of 0.42.

A conservative estimate of the proportion of persons who are bitten by rabid dogs who subsequently die with symptoms of hydrophobia places the number at 16 per cent., and in some series that have been reported a much higher percentage than this is recorded. The difference, therefore, is overwhelmingly on the side of the Pasteur method of treatment, and the figures obtained at the Paris Institute have been fully substantiated by the experience of the scores of similar institutes that have been established in various parts of the world.

WAITING-ROOM LITERATURE.

In one of his recent fables, George Ade quotes an old physician, who advises a young man not to take up the profession of medicine. Among other evidences of the unprofitableness of the study, the physician remarks that "we are most of us held down so close to the carpet that we have to buy last year's magazines to put in the waiting room." Mr. Ade is certainly an observer and has probably frequented physicians' waiting rooms not a little to make such a generalization as this. There are many of these rooms where the literature left to pass the patient's time is not only antiquated, but often suggestive of contagion, in view of the handling, etc., by the patients who pass in and out. We have often been a little timid about too close handling of some venerable documents on the waiting room tables of dermatologic specialists, and have sometimes thought it might be better to have none at all for the peace of mind of apprehensive individuals. It is a good thing to have magazines, current illustrated periodicals, etc., on the waiting room table, for the patients would be more likely to patiently await their turn, but there should be either a certificate of disinfection attached to each periodical or the date of publication should show that the matter is moderately new, not lapping too far over in the past century.

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[1] Annales de l'Institute Pasteur, 1902, 16, p. 452.

THE INTERNATIONAL MADRID CONGRESS.

According to an editorial in *El Siglo Medical* of April 5, the preparations for the International Medical Congress were in a very unsatisfactory condition even at that late date, and it feared that much would be found open to criticism at the time of the meeting. Apparently there has been a lack of enthusiasm and of active co-operation of the medical profession in both the city of Madrid and the other provinces, and to such an extent as to seriously compromise the success of the congress. Our contemporary also seems to anticipate criticism of some of the local institutions, educational and charitable, by a pretty severe condemnation by itself of their present conditions. It is a fact that these international congresses are a heavy draft on the profession of the country entertaining them, and this point has been specially raised in connection with previous meetings. Spain can hardly be expected to do all that has been done on some former occasions, and allowances should be correspondingly made for some deficiencies that might not be expected elsewhere. We are sorry to say that the fears of the editor of *El Siglo Medical* are being realized, according to our correspondent in Madrid. He cables that arrangements show lack of systematic organization and that it is almost impossible to get information or co-operation in making report of the scientific work.

THE INDEX MEDICUS.

We are informed on good authority that the "Index Medicus," the first number of which under the new auspices has just appeared, is not receiving its due support, that 251 copies covers the entire subscription list among the profession, both abroad and in this country. That would bring in a return of only $1,255, with an expenditure of about $12,000 per annum. The Carnegie Institution has generously devoted $10,000 per annum to the publication of the index for three years and it was intended to continue this indefinitely, provided sufficient interest is shown in this enterprise, which has in the past redounded so much to the credit of our country. The "Index Medicus" should go to every place where at least an attempt at clinical or research work is being done, to every insane asylum, to every large hospital, to every medical educational institution, and, in our opinion, it is almost an indispensable adjunct to the editorial work of every medical journal worthy of the name. If it can receive subscriptions from each of these sources, it would not only relieve the Carnegie Institution of its expense, but furnish a considerable surplus for its enlargement and increased usefulness. It is not an American publication alone. It should receive equal patronage from every part of the world. It is just as discreditable, if not more so, that its subscription list from abroad is not more than double or treble what it is in this country. No person who is interested in medical literature, no one who is attempting to do original work, can wilfully dispense with the aids it can offer. The fault of much of the work that has been done and is still being done throughout the world, especially in some of the institutions in this country, is that so little is known of what others are doing and, consequently, a great deal of human effort is needlessly wasted. Much sciolistic conceit would be also avoided if this publication, with its preceding series and additional data from the "Index Catalogue," could be properly utilized, and medical literature would be a far more satisfactory thing than it is at present. Brown-Sequard, the celebrated French physiologist, used to bitterly complain of the amount of rediscovery of his work that he was constantly seeing in the German literature. It is only by such bibliographies as the "Index Medicus" that much of this can be avoided. We hope the subscription list will be at least quadrupled. The very moderate subscription price, $5, puts it within the reach of everyone who is attempting to do any medical literary work, and no one should attempt that without having at least access to its aid. We do not believe in multiplication of references or unnecessarily elaborate bibliographies, and the rule of verifying one's references by the originals, of course, is a good one to be followed, but there is no better first guide to medical literature than the "Index Medicus" as now presented to the profession.

Medical News.

CALIFORNIA.

State Board Examination.—At the April examinations for license to practice medicine 39 applicants appeared, 25 of whom passed; 12 were rejected and 2 were conditioned.

New Oakland Health Board.—Drs. J. Hamilton Todd, former health officer; Arthur L. Cunningham and Samuel H. Buteau, Oakland, have been appointed members of the Board of Health.

Typhoid at Stanford.—It is reported that a hundred cases of typhoid fever exist in and about Stanford University, Palo Alto, and that two deaths have occurred. The cause is supposed to be infected milk supplied by a dairy in Palo Alto.

Surgeons Sued.—Mrs. Edna Rooney, Oroville, has sued two homeopathic physicians for $25,000 damages on account of the death of her husband. She alleges bunglesome and negligent attention and a mistake in diagnosis by reason of which her husband's left eye was enucleated for malignant disease, the patient dying a few days later.

Personal.—Dr. Samuel E. Latta, Stockton, has been appointed a member of the San Joaquin Insanity Commission.——Dr. Fred W. Colman has been elected health officer of Lodi, vice Dr. E. A. Burchard, resigned.——Dr. S. W. R. Langdon has been appointed a member of the Stockton Board of Health, succeeding Dr. Charles R. Harry, who is going to Europe for a course of advanced study.——Dr. Ernest B. Hoag has been appointed city bacteriologist of Pasadena.

ILLINOIS.

Chicago.

School Moves.—The Illinois School of Electro-Therapeutics has moved into its new quarters at 35 Randolph street.

Suit for Damages.—Mrs. Martha E. Jacobs has sued Dr. Espy L. Smith for $10,000 damages. She alleges that she has been permanently crippled by reason of improper care of a broken leg.

Mikulicz in Chicago.—Dr. Mikulicz of Breslau is in Chicago this week, the guest of Dr. J. B. Murphy and of the Chicago

Surgical Society. He will attend the session of the American Medical Association at New Orleans next week.

Deaths of the Week.—Pneumonia heads the list of deaths for the week with 163, or more than 25 per cent. of the total mortality. There were 64 deaths from consumption; 38 from heart diseases; 30 each from Bright's disease and violence; 28 from bronchitis; 26 from nervous diseases; 19 from measles; 14 from diphtheria; 11 from scarlet fever; 8 from typhoid fever, and 7 each from whooping cough and influenza.

More Smallpox.—Seventeen cases of smallpox were discovered during the week, one of them being a convalescent, the nature of whose disease was not detected until he was well. The remaining sixteen were removed to the isolation hospital before there had been any serious exposure. Thirteen of the seventeen cases—all adults over 40 years of age—had never been vaccinated at all, and four presented old doubtful scars of vaccination performed in infancy.

Death-Rate Still High.—The total deaths recorded during the week were 639, or only one less than for the previous week and 89 more than for the corresponding week of 1902. The average April death rate since 1893 has been 16 25 per 1,000 per annum —the highest being 20.91 in April, 1893, and the lowest 13.84 in April, 1897. For the first twenty-five days of the present April the rate is 18.74 per 1,000, or 35.4 per cent. higher than the lowest and 10.3 per cent. lower than the previous highest.

Warns Again Against Pneumonia and Influenza.—The health department repeats its warning first given in 1898 regarding the gravity of pneumonia and influenza. It emphasizes the necessity of prompt resort to competent medical attention on the first appearance of symptoms, and the importance of isolation of cases, the instant disinfection and speedy destruction of the discharges from the nose, mouth and throat, and other preventive measures which are enforced by all intelligent physicians in the care of other contagious or infectious diseases.

Object to Test.—Medical students at the University of Chicago have protested against the revival of the supplementary examinations on the work of the first two years by the faculty. They designate the examination as "an unnecessary burden and the survival of an obsolete system of medical instruction" and as "an unjust discrimination." The examination is on the entire work of the first two years. It is supplementary to the regular examinations and is said to entail on the students a vast amount of special preparation, which is useless, as they are compelled to take a third examination in the same subjects when applying for license to practice.

INDIANA.

Smallpox.—During March 873 cases of smallpox were reported, with 28 deaths. In comparison with March of 1902 there was an increase of 30 per cent. in area invaded, of 4 per cent. in number of cases, and of 1,300 per cent. in deaths.

Hospital as Memorial of Wife.—Hon. D. D. Dykeman, Logansport, has announced the gift to the city of a hospital to cost $50,000 in memory of his wife, who died in March. He will also arrange that at his death his entire estate will be available as an endowment for the institution.

Indiana Medical College Commencement.—On April 17, a class of 76 received their diplomas as doctors of medicine from Hon. Addison C. Harris, president of the University of Indianapolis, of which the Medical College of Indiana is the medical department. William Lowe Bryan, president of Indiana University, delivered the address to the class.

March Mortality and Morbidity.—The monthly statistics of the State Board of Health shows there were 2,959 deaths in March, an annual rate of 13.8 per 1,000. In the corresponding month of last year the rate was 14.2. Deaths by important causes were: Pulmonary tuberculosis, 432; typhoid fever, 55; diphtheria, 25; scarlet fever, 11; measles, 7; whooping cough, 24; pneumonia, 402; diarrheal diseases, 21; cerebrospinal meningitis, 18; influenza, 88; puerperal fever, 11; cancer, 92; violence, 120, and smallpox, 38. As compared with the corresponding month of last year an increase appears in influenza and violence. Of the total deaths 438, or over 15.8 per cent. were under one year of age, and 797 or 28.8 per cent. were 65 and over. The order of disease prevalence was as follows: Influenza, smallpox, rheumatism, bronchitis, pneumonia, tonsillitis, scarlet fever, pleuritis, measles, typhoid fever, whooping cough, intermittent fever, erysipelas, diphtheria and croup, diarrhea, inflammation of bowels, puerperal fever, dysentery, cerebrospinal meningitis, cholera infantum and cholera morbus.

IOWA.

Smallpox Near Sanborn.—A case of smallpox in a farmhand near Sanborn is reported by Dr. Leary, who is in attendance. This is the first case in this vicinity for a year.

A Test Case.—Dr. Benjamin A. Stockdale, Council Bluffs, has filed suit against the treasurer of state, to recover $250 paid as a license fee as an itinerant physician. In his petition Dr. Stockdale attacks the constitutionality of the law which discriminates between local and itinerant physicians, and charges that the law violates the state constitution and the fourteenth amendment to the constitution of the United States.

Commencement.—Drake University Medical Department, Des Moines, graduated a class of 11, April 22. Dr. A. Raymond Amos, the new dean of the college, delivered the address of the evening, and Dean Lewis Schooler presented the class to General F. M. Drake, who conferred the degrees.——On April 29 a class of 13 was graduated from Sioux City Medical College. Dr. George W. Beggs, president of the board, conferred the degrees.

Webster City's Hospital.—Mercy Hospital, just completed in Webster City, is the property of the Northwest Iowa Conference of the M. E. church. The structure was built by Jacob M. Funk at a cost of $25,000. and was presented on the condition that patients be admitted regardless of race, color, religion or financial condition. The hospital contains more than 40 rooms and will accommodate ordinarily about 35 patients.

KANSAS.

Diphtheria Near Hartford.—Diphtheria is said to be raging in the southern part of Lyon County. It is said that seven out of nine children in one family on a farm near Hartford have died.

Smallpox, Not Bubonic Plague.—The disease reported from Rice County as bubonic plague has proven to be confluent smallpox. Of the first twelve affected, 8 died. The disease has been confined strictly to three towns, Delavan, in the west end of Morris County, and Geneseo and Bushton in Rice County.

New Doctors.—The eleventh annual commencement of Kansas Medical College, Topeka, was held March 27, when a class of 12 was graduated. Dr. John E. Minney, dean of the faculty, presided, and gave a short sketch of the history of the college; Dr. Plass, president of Washburn University, delivered the address to the class; Dr. O. Portis Davis made the address on behalf of the faculty, and Dr. John C. McClintock, president, conferred the degrees.

Temporary Permits to Practice.—Dr. Henry W. Roby, secretary of the Kansas State Board of Medical Registration and Examination, has notified the holders of temporary permits to practice that there is no charge for the temporary permit; that the regulation fees for a permanent license must accompany each application; that the temporary permit must be recorded promptly with the county clerk; that each day it remains unrecorded he is liable to a fine of $50 to $200, and that until his permit is of record, he has no right to practice or to collect fees.

LOUISIANA.

Quarantine Arrangements Complete.—The quarantine arrangements have been completed and the marine inspectors are at their posts in Cuba, Central and South America. Dr. King Holt, Baton Rouge, has been appointed resident inspector at Havana.

Personal.—Dr. Rolando Kuehn, port surgeon at Bluefields, Nicaragua, for 15 years, through many changes of administration and revolutions, and for a time a resident at the leper colony of Molokai, Sandwich Islands, has returned to America to attend the Association session, and is the guest of Dr. Basilidus Lavigne, New Orleans.

Sleeping Car Disinfection.—The State Board of Health has passed a resolution requiring every sleeping car company operating in Louisiana to thoroughly disinfect each sleeping car after every round trip, under such regulations as the board may prescribe, provided that after personal investigation the quarantine committee finds such methods of disinfection necessary.

Louisiana Keeps Her Own Quarantine.—The State Board of Health has decided not to make its quarantine regulations conform with those of the U. S. Public Health and Marine-Hospital Service, or to use the marine-hospital inspectors instead of its own, or to relieve coastwise vessels of the necessity of inspection on entering New Orleans. These changes were suggested by Dr. Lindsley of Havana. The Louisiana board will maintain its own inspectors at all gulf forts where there is considered to be any danger of the importation of disease.

MARYLAND.

Baltimore.

Commencement.—Baltimore University School of Medicine graduated a class of 24, April 21, two of whom were women.

The Crim Sale.—The first three days of the sale of the collection of antiques of the late Dr. Wm. H. Crim terminated on Friday, the receipts being $29,300.

Personal.—Dr. Ira Remsen, president of Johns Hopkins University, was elected vice-president, and Dr. William H. Welch member of council of the National Academy of Services at Washington on April 22.

Fluctuating Mortality.—The fluctuations in the mortality of Baltimore were rather striking. Last week the number of deaths fell to 170, an annual rate of 16 per 1,000, pneumonia and consumption leading with 26 and 22 deaths respectively. One case of smallpox was reported, one of the suspects from Homburgville camp mentioned below.

Control of Tuberculosis.—At a meeting held April 24, for the discussion of measures for the control of tuberculosis, Dr. Herman M. Biggs of the New York Health Department delivered an address on the methods of dealing with the disease in that city. Remarks were also made by Drs. Welch, Osler, Fulton, Thayer, and Health Commissioner Bosley.

Negligence Charged.—Dr. Bosley, health commissioner, charges the health officers of Baltimore County with negligence in not maintaining a strict quarantine at the Homburgville camp near the city where several cases of smallpox have occurred. It is believed that 30 suspects from that camp have been allowed to come to the city. Ten patients have been taken from this camp to the City Quarantine Hospital.

Woman Takes Prize.—Dr. Florence R. Sabin, Denver, Colo., assistant in anatomy in the Johns Hopkins University Medical School, has been awarded the prize of $1,000 offered two years ago by the Naples Table Association for the best thesis of individual research in biology, physics, zoology and chemistry. The award was made by the association at a meeting held at Smith College, April 18. There were 11 candidates for the prize. The work for which Dr. Sabin received this prize was the discovery last year that the lymphatic system arises from the veins. Dr. Sabin graduated at Johns Hopkins in 1900, and is the first woman to receive an appointment as instructor in the medical department. She was a fellow in anatomy there in 1901.

Index Medicus Redivivus.—Drs. William H. Welch and William Osler gave a dinner at the Maryland Club, April 18, to Dr. Robert Fletcher of Washington, editor of the "Index Medicus," to celebrate the revival of its publication. After being published for 21 years this work lapsed for want of support. It has now been resumed through the good offices of Mr. Daniel C. Gilman and Dr. S. Weir Mitchell, who have secured an appropriation for it from the Carnegie Institute of $10,000 per annum for three years. It is understood that the continuation of this amount will depend on the interest taken in the work by the profession. Among those present were Drs. Abraham Jacobi, James R. Chadwick, W. W. Keen, F. P. Henry, Garrison, King and Yarrow of Washington; Acting Surgeon-General De Witt, and Major Kean of the Army, Mr. Marcus Baker of the Carnegie Institute, and others.

MASSACHUSETTS.

Bequests.—Mrs. Phebe R. Sturtivant left $10,000 to the New England Baptist Hospital, located on Parker Hill, Roxbury, Mass.——By the will of John J. Day, Quincy, $5,000 is bequeathed to the Quincy Hospital.

Suit for Autopsy.—A suit for $2,000, brought against the Massachusetts General Hospital for performing an autopsy on a Hebrew, in which the defense claimed that permission was granted, and the plaintiffs declared that by reason of the autopsy certain religious rites were rendered impossible, was decided in favor of the defendant.

First-Aid Training.—At the annual meeting of the Massachusetts Emergency and Hygiene Association, Dr. Grace Wolcott reported 241 patients cared for during the year at the Vincent Hospital and 27 attendants trained in the courses of the training school. Courses of lectures have also been given to firemen and policemen on first-aid and ambulance work.

Disease and Death.—During the week ending April 25 242 deaths were reported in Boston, equivalent to an annual deathrate of 21.52 per 1,000. This increase included 34 deaths from pneumonia; 6 from whooping cough; 20 from heart disease, and 9 from violence. There were 20 cases of diphtheria reported, with 3 deaths; 29 of scarlet fever, with 3 deaths; 11 of typhoid fever, 36 of measles, and 21 new cases of tuberculosis were reported, and 26 deaths from that disease.

Massachusetts General Hospital Report.—The annual report of the Massachusetts General Hospital states that $227,373 was expended during the year. Of this $157,744 was expended for free patients, a sum that is mainly met by special funds and free bed subscriptions; 5,199 patients were treated at an average weekly cost of $17.16; 26,662 patients were treated in the out-patient departments and 4,858 in the accident rooms. At the McLean Hospital for the Insane, in Waverley, which is under the same board of directors, $238,000 was spent for 330 cases, an average weekly cost of $25.99 per patient.

MICHIGAN.

Hospital Site Purchased.—A site at the corner of West Huron and College streets has been purchased by the Pontiac Hospital Association. The ladies in control expect to have the hospital completed this season.

Graduating Exercises.—The Michigan College of Medicine and Surgery, Detroit, graduated a class of 14, April 24. Dr. Hal C. Wyman, dean of the faculty, administered the Hippocratic oath and presented the diplomas.

Open Hospital at Laurium.—The new Northern Michigan General Hospital at Laurium was formally opened April 8. Dr. A. J. Ochsner, Chicago, delivered the address of dedication. The hospital will accommodate 100 patients.

Medical Staff Re-elected.—At the annual meeting of the medical staff of the Saginaw General Hospital, the following officers were re-elected: Dr. Sidney I. Small, president; Dr. Bert B. Rowe, vice-president, and Dr. Elmore E. Curtis, secretary.

"Cuban Itch" at Georgetown.—Ignorant or careless of the danger attending the so-called "Cuban itch," the authorities of Georgetown are said to have paid no attention to the disease which is prevalent in that place. The patients have not been quarantined.

MINNESOTA.

State Board Examines.—Out of 23 applicants for license to practice medicine 20 passed the examination of the State Board of Medical Examiners, and were issued licenses.

Personal.—Dr. Charles Lyman Greene of St. Paul has been appointed professor of theory and practice of medicine in the medical department of the State University of Minnesota.

Object Lesson in Vaccination.—Charles Stevens, secretary of the Anti-Vaccination League of Minneapolis, died from smallpox, April 15. He had frequently denounced vaccination as unefficacious and a barbarous practice.

Smallpox.—In the week ended April 13 there were 162 cases of smallpox reported in the state. Benton Township, Beaver County, furnished 30 cases; St. Paul, 12; and Minneapolis, and Elgin Township, Clay County, each 11.

Medical Course Shortened.—The board of regents of the university has decided to institute a six-year academico-medical course, whereby a student may complete both his academic and medical course in six years, instead of in seven years, as at present obtains.

MISSOURI.

Presentation.—Dr. Max C. Starkloff, health commissioner of St. Louis, was presented with a handsome watch and chain by the employes of the health department, April 23.

Change of Control.—On May 1, at the request of the faculty, the Marion-Sims-Beaumont Medical College, St. Louis, passed under the control of the Jesuit Fathers of the St. Louis University. The terms of agreement between the two faculties are that the university shall contribute $125,000 and control the examinations for entrance. This latter condition is to raise the standard of candidates for admission.

Old Physicians Honored.—On April 14 a banquet was given at the Planters' Hotel, St. Louis, by the St. Louis Medical Society in honor of four of its old members, all octogenarians: Drs. William M. McPheeters, aged 87; William Johnston, aged 88; Simon Pollak, aged 89, and John Bates Johnson, aged 86. The last-named was ill and unable to be present. Dr. William M. McPheeters was graduated from the University of Pennsylvania in 1840, and came to St. Louis a year later. He established the first public dispensary west of the Mississippi River, was a professor in St. Louis Medical College until 1861, when he entered the Confederate service as medical director on the staff of General Price. In 1850 he introduced a resolution in the St. Louis Medical Society, which was followed by the organization of the state medical society. He was president of this society in 1852; president of the St. Louis Medical Society in 1856, and vice-president of the American Medical Association in 1869. Dr. William Johnston received his degree in medicine from the Medical Department of Louisville University in 1837, came to St. Louis in 1850; was president of the St. Louis Medical Society in 1866, and is still in active practice. Dr. Simon Pollak, a native of Bohemia, received his medical education at the University of Vienna and was given his degree in 1835. Two years later he came to the United States, and settled in St. Louis in 1845. In 1852 he founded the Missouri School for the Blind, and in 1860 the eye and ear clinic at Mullanphy Hospital, which he still has in charge. During the Civil War he served in the American Sanitary Commission. He has been many times treasurer, and once president of the St. Louis Medical Society. Dr. John Bates Johnson graduated from Berkshire Medical College, Pittsfield, Mass., in 1840. A year later he came to St. Louis; was one of the faculty of Kemper College from 1846 to 1854, when he was elected professor of clinical medicine in St. Louis Medical College. He was one of the founders, and once vice-president of the American Medical Association; one of the founders and an early president of the state society, and was a member of the sanitary commission in the Civil War. Dr. Elisha H. Gregory responded to the sentiment, "The Old Guard"; Dr. Woodson Moss spoke on "The New Organization"; Dr. W. G. Moore on "Honor to Whom Honor Is Due"; Dr. Alonzo R. Kieffer on "The St. Louis Medical Society," and Dr. LeGrand Atwood on "Before the War." The guests of the evening were also called on for speeches and responded. Dr. Robert M. Funkhouser officiated as toastmaster.

NEW YORK.

Hospital Cornerstone Laid.—The cornerstone of the new $140,000 Norwegian Hospital, Brooklyn, was laid with impressive ceremonies April 19.

Personal.—Dr. Charles G. Stockton, Buffalo, has returned from California.——Dr. Willard Parker was knocked down by an automobile, April 23, sustaining a fracture of the left leg and some contusions.

Mikulicz in Buffalo.—Professor von Mikulicz of Breslau was in Buffalo, April 25, the guest of Dr. Harvey R. Gaylord. He gave a clinic to a large number of professional men, and in the evening a complimentary dinner was tendered him by the profession.

Advice for Consumptives.—President Lederle of the New York City Board of Health has sent out all over the city, especially among the crowded tenement house districts, a printed circular, giving advice on the treatment of consumption, in English, German, French and Hebrew, and calling attention to the fact that the spread of the disease is largely due to spitting.

Milk Adulteration and Proposed Legislation.—The Commissioner of Health states that there has been smuggled into a bill now before the legislature, and known as Senate Bill No. 1104, an apparently innocent clause which, if allowed to become law, will practically nullify the present law under which dealers are prosecuted for the adulteration of milk. The objectionable clause is in connection with the recovery of penalties for violation of the Sanitary Code, and says: "Which shall not be punishable as misdemeanors unless the wilful intent to violate such section shall be first proven." Last year there were collected in fines from milk dealers $19,118, as against $6,292 in 1901. Of 3,970 samples of milk taken for analysis last year 2,095, or 52 per cent., were found to be adulterated.

PENNSYLVANIA.

Telephone Advice.—The Allegheny County Medical Society has adopted a scale of charges of from $2 to $5 for advice given over the telephone.

Ray Bill Defeated.—The Ray bill, the object of which was to raise the standard of preliminary education requisite to entrance to medical colleges, has been defeated in the senate. Its defeat is ascribed to the influence of low-standard medical colleges.

Rabies Is Reported.—Twelve children, playing on the street, were bitten by a mad dog, which ran into a crowd. The victims were all promptly taken to the Pasteur Institute at Allegheny. Two children were also recently taken to the institute from Waynesburg for a similar reason.

Cocain Bill Passed.—This bill was passed by the legislature and has been signed by the governor, fixing a penalty of $100 or six months' imprisonment for the sale of cocain, or any patent or proprietary remedy containing cocain, without a physician's prescription, or to a habitual user of cocain.

Philadelphia Must Pay.—A claim of $67,000 against Philadelphia by the Norristown State Hospital for the Insane for the care of patients sent from the former, was recently allowed by the Supreme Court. The defense was that the city had in previous years overpaid the hospital, but the city's offsets were adjudged to have been barred by the statute of limitations.

Suppression of Smallpox.—For the information of boards of health and of school boards organized as boards of health for the suppression of smallpox, the secretary of the state board has had printed in pamphlet form regulations controlling the disbursement of the $50,000 placed at its disposal to aid in this work. The fund shall not be used for any other purpose than for assisting local communities during the prevalence of smallpox and for meeting just and reasonable expenses incurred in the suppression of that disease. School boards acting as boards of health, applying for aid, must furnish sworn evidence that they have organized formally and have adopted sanitary measures and appointed a paid sanitary agent. In no case will the state board assume the entire expense, and no unvaccinated person shall be appointed to any official position charged with carrying out preventive measures.

Bills Vetoed.—The following bills passed by the legislature were vetoed by the governor: A bill compelling manufacturers of baking powder containing alum to display the words on each package, "this baking powder contains alum." As a reason for veto, the governor states that it would be proper to require that all baking powders should have a label describing the ingredients and their qualities, but that it would be unjust to require one ingredient to be displayed without any reference to quantity. A bill making it unlawful for persons to spit in public conveyances and public places. As a reason for nonapproval of the latter, the governor states that, while spitting is not nice, pleasant or polite, it seems that it would be better to leave the cure of a bad habit to gradual development of a better taste and higher culture rather than to attempt a regulation by law which imposes imprisonment instead of a well-digested health regulation. A bill making it a misdemeanor for persons with a knowledge of a case of contagious disease not to report the fact.

TENNESSEE.

Disinfect After Floods.—The Memphis Board of Health has cleaned and disinfected 163 houses in that part of North Memphis along Bayou Gayoso, which was submerged during the recent floods.

Graduates Class of Forty.—The medical department of Grant University, Chattanooga, held its annual commencement, April 14, graduating a class of 40. Dr. George A. Baxter delivered the faculty address and the degrees were conferred by Rev. G. T. Newcomb.

City Hospital Staff Elected.—On April 20 the following members were elected to the staff of the Memphis City Hospital: Drs. Leon L. Meyer, Alonzo B. Oliver, E. Michel Holder, Maxence B. Herman, William T. Black, James L. Andrews, Oswald S. McCown, William W. Taylor, Elizabeth C. Kane, Pope M. Farrington, Kennedy Jones, George R. Livermore, and B. Frank Turner.

State Board of Medical Examiners.—At the recent examination held in Nashville, 31 out of the 154 applicants for license to practice failed to pass.——The board appointed Dr. Robert Pillow, Columbia, delegate to the Interstate Medical Examiners' Association at New Orleans, May 4, with Dr. William H. Halbert, Nashville, as alternate.——The secretary, Dr. Thomas J. Happel, Trenton, was authorized to make a new directory of the physicians of the state.

UTAH.

Personal.—The Board of Commissioners of the State Mental Hospital has appointed Dr. Daniel H. Calder, Brattleboro, Vt., assistant physician.

Without License.—James Davidson, Salt Lake, has been charged with practicing medicine without a license and a warrant has been issued for his arrest.

State Board Meets.—The State Board of Medical Examiners reorganized at its April meeting and elected Dr. Elias S. Wright, Salt Lake, president; Dr. Robert W. Fisher, Salt Lake, secretary, and Dr. Briant Stringham, Bountiful, treasurer. The board passed 12 out of 13 applicants to practice medicine.

Salt Lake's March Health.—The total mortality for March was 67, representing an annual death rate of 10.72 per 1,000. Pneumonia caused 11 deaths; tuberculosis and cancer each 4, and diphtheria 10. During the month 161 births were reported. Of smallpox 92 new cases were reported; of diphtheria, 37; of scarlet fever, 15; of chicken-pox, 18; of measles, 8, and of typhoid fever, 4.

VERMONT.

To Combat Contagious Disease.—The city council of St. Albans has appointed Dr. Antoine H. Desloges to care for the contagious diseases of the city at an annual salary of $800.

Osteopaths Sued.—John S. Wilkins, Burlington, has sued W. W. Brock and Mrs. L. K. Rosselle of the same city for $10,000 damages, alleging that his wife, who was under treatment by the defendants, died as a result of severe pounding, bruising, etc., administered by them.

Smallpox Scare.—Burlington has a smallpox scare due to the arrival there of a family of nine from Manchester, N. H., whence they eloped. Five of the children and the mother were recovering from smallpox. Starting at night they traveled in a common coach and were found in a crowded tenement in Burlington. Two of the children were at work before the family was traced by the health officers. No one of them can speak English.

WASHINGTON.

Smallpox Under Control.—The county health officer of Walla Walla County reports that smallpox at Wallula, Dixie and College Place is now well under control.

Personal.—Dr. William L. Ludlow, Seattle, recently appointed health officer to succeed Dr. Frank M. Carroll, resigned, has been appointed a member of the local board of medical examiners. ——Dr. A. E. Stuhl, Colfax, has been appointed a member of the State Board of Medical Examiners, vice Dr. William G. Tucker, Port Townsend.

Spokane's Mortality Heavy.—The record for deaths in Spokane was broken in March, in which 84 deaths were reported. Pneumonia caused 10 deaths; tuberculosis, 8; kidney disease, 10; heart disease, 7; and suicide, 5. The prevalence of influenza is considered the cause of the heavy mortality. During the year 520 deaths and 829 births were reported. There were 1,189 cases of contagious disease, smallpox leading with 477.

GENERAL.

Professors Ewald and Tillmanns, of Berlin and Leipsic, respectively, are in this country to attend the session of the American Medical Association at New Orleans next week.

To Watch for Mosquitoes.—The U. S. P. H. and M. H. Service surgeons at the fruit ports of Central and South America have been directed to watch for the *Stegomyia fasciata* and to take precautions to prevent yellow fever and to watch for the occurrence of the disease.

Reception.—The Medical Club of Philadelphia will give a reception at the Hotel Bellevue, May 15, to Dr. George H. Simmons, Chicago, Secretary of the American Medical Association; Prof. von Mikulicz-Radecki, Breslau; Prof. C. A. Ewald, Berlin; Prof. Hans Kehr, Halberstadt, and Prof. Hermann Tillmanns, Leipsic, Germany.

Open Door in Turkey.—American physicians and dentists will now be on the same standing in Turkey as are those of France. They have heretofore been refused examination and could not practice. They will now be allowed to practice if they present good diplomas and pass the examination. This is the result of pressure brought to bear on the sultan by President Roosevelt and U. S. Minister Leishman.

Mikulicz Holds Clinics.—Prof. Johann Mikulicz of Breslau, whose visit to America we mentioned last week, is conducting clinics in various cities, including New York, Cleveland, Philadelphia and Chicago. He expects to visit Denver and other western cities. Dr. Mikulicz speaks very highly of American hospitals and says they far surpass those of Europe. He criticises the administration, however, in that there is not the autocratic power in the hands of one man, which he thinks an advantage in Germany. Here, he says, there is a division of authority and more frequent changes in the personnel of the staff that he thinks do not work out as well. Dr. Mikulicz gave a clinic, April 20, in Bellevue Hospital, for the faculty and students of Cornell University Medical College. He had as cases a gastrostomy, an inguinal hernia and a fibromyoma of the uterus. The gastrostomy was performed according to Witzel's method, which the professor appeared to consider the best. On the hernia he did an ordinary Bassini operation and the other case was treated by myomectomy. The interesting peculiarity of his work was his great dexterity, as the gastrostomy and the hernia were done in an extremely short time. One of the surgeons present remarked that he had never seen a Bassini operation completed more quickly, although the case, to be sure, was of the acquired variety and presented no unusual difficulties. Cotton gloves were also noticeable as the professor's preference. These were changed as fast as they became blood stained, but to the onlooker it seemed that considerable time was wasted in drawing on a clean pair each time. He remarked to the house staff that for appendicitis operations he preferred the old-fashioned transmuscular and not intermuscular incision. In closing the abdominal wound he employed numerous layers of chromicized catgut sutures. This material was also used very freely in suturing the uterus after the myomectomy.

CANADA.

Mandamus Refused.—In the case against the British Columbia physician who was alleged to have attended a woman in confinement while he was intoxicated, the judge has refused to compel the College of Physicians and Surgeons to hear and determine the charges.

McGill University in Need of Funds.—The salaries of McGill professors are the subject of much discussion. Four professors have recently received offers to go elsewhere at largely increased salaries. McGill needs, says one of the professors, a large measure of support from the citizens of Montreal.

A University for British Columbia is proposed by the graduates of the University of Toronto in that province. A large number of those in the terminal city, Vancouver, have met and decided to send a circular to all the graduates throughout the province. The proposal is to have a university with an examining body with power to grant degrees, and without a teaching staff.

Sir James Grant, Ottawa, Honored.—In recognition of fifty years spent in the practice of medicine, during forty-nine of which he was located in Ottawa, Sir James Grant, M.D., was tendered a banquet, April 21, by the medical fraternity of the capital and of the Ottawa valley. Sir James was greatly touched by this expression of friendship, and favored the company with some reminiscences of his medical career.

Personal.—Dr. J. M. Elder, Montreal, has gone to England until July.——Dr. James F. Boyle of Toronto has just completed a post-graduate course in Scotland, where he has succeeded in taking the degrees of L.R.C.P. and L.R.C.S., Edinburgh, and L.F.P.S., Glasgow.——Dr. Casey A. Wood, Chicago, was given the degree of D.C.L., *honoris causa*, at the annual conferring of degrees of Bishop's University, Montreal, April 24.

Dr. J. H. Richardson, Toronto, Honored.—The first medical graduate of the University of Toronto, a teacher of anatomy for half a century, an octogenarian, and one of Toronto's much-respected medical men, was honored by a dinner, April 15, by his old students, at the same time a portrait was presented to the university. A large number of medical men from Toronto, Ontario, and different parts of the United States gathered for the occasion to do honor to their old teacher. Dr. Richardson first began the study of medicine in 1841.

No Dominion Registration.—The Quebec legislature has rejected the proposal to ratify the scheme of Dr. Roddick, M. P., for dominion registration, now known as the Canada Medical Act, 1902. It was defeated by a large majority for the assigned reason of its alleged interference with provincial rights, and the French-Canadian guards very jealously his provincial rights. It is understood that the matter will be brought up again next session, and also before the College of Physicians and Surgeons, which, it will be remembered, voted last fall against the introduction of any legislation into the Quebec house of representatives to make the act operable.

Tuberculosis Conference.—The third annual meeting of the Canadian Association for the Prevention of Tuberculosis was held at Ottawa, April 16. In addressing the conference, Governor-General Minto stated that he believed there were annually not less than 30,000 cases of tuberculosis in Canada and the number of deaths was about 9,000. Dr. H. Beaumont Small read the annual report. In Canada out of 36 hospitals only 13 had special accommodation for consumption patients. Dr. A. J. Richer of Montreal read a paper, in which he estimated the annual loss to Canada from tuberculosis at $72,000,000, this being based on the deaths and invalidation from the disease. He further pointed out that, while the federal government spent nearly $20,000 annually in preventing tuberculosis among cattle, it had only contributed $1,000 towards the same end among human beings.

FOREIGN.

Physician Enters Parliament.—Dr. Charles Frederick Hutchinson has been elected a member of Parliament from Sussex, England. He had retired from active practice.

Women Physicians Graduate at Bonn.—The daughters of two deceased local physicians have recently successfully completed their medical course at Bonn and graduated with distinction, the first women to graduate as physicians there.

Prizes for Essays on Sick Nursing.—Thirty prizes are offered for the best works on the subject: "How to Improve the Patient's Mood and Win His Confidence." The competing articles must be sent in before October 1 to the publishers of the "Deutsche Krankenpflege-Zeitung," Verlag Staude, Berlin W, 35.

Large Fine by the German Court of Honor.—A regularly qualified physician has been fined $375 by the Dresden medical court of honor, the highest fine it is empowered to impose. He was reprimanded officially by the court last September for cooperating with a notorious charlatan, Bilz, and has since resumed his connection with him.

Australian Physician Fined.—Dr. Alfred M. Keighly was fined $250 at Newtown, Australia, March 6, for the alleged representation that he was a legally qualified practitioner. He has given notice of appeal. He asserts that he is a graduate of the Cincinnati College of Medicine and has further studied in Europe. It was said he had been refused registration by the Australian medical board.

Campaign Against Charlatans in Germany.—The German society that has been recently formed for the purpose of educating the public in regard to the evils of quack practices has issued an appeal to the profession at large for funds with which to conduct its work on an extensive scale. All interested are requested to join the society. Subscriptions and other gifts may be sent to the treasurer, Dr. Albert Wilde, Charlottenburg, Rosinenstrasse 3, Germany.

Dangers of Using Circulars for Wrapping Medicines.—A physician at Dresden prescribed a snuff for a patient with asthma, which contained belladonna, hyoscyamus and datura. The druggist dispensed it in two small boxes, each wrapped in a circular advertising somatose. The patient noticed the directions for taking the somatose, a teaspoonful in milk, three times a day. Supposing that they applied to the contents of the boxes, he took a teaspoonful of the snuff in this way, with severe but not fatal intoxication.

Foundation of Monthly for Discussion of Medical Sociology.—A periodical has been founded by M. Fürst and K. Jaffe of Hamburg which announces that it will treat the "borderland" questions of practical medicine and social practice, and all matters pertaining to the material and economic welfare of the profession. organization, etc., without taking part on either side in any movement, merely presenting facts in an objective, scientific way. Subscription $2.50. Publisher, G. Fischer of Jena. The name of the new journal is the "Monatsschrift für soziale Medizin."

Suicide Increases.—The lay press quotes statistics to show that suicide is increasing. In all countries suicide has been more common with men than with women. The proportion of women is greatest in America and Spain. In France during the last twenty-five years the proportion has increased from 157 to 224 per million of the population. In Germany the proportion has been about the same and in Belgium somewhat less. In Russia there was no increase. The increase in other countries was in the following order: Austria, Hungary, Australia, Ireland, Scotland and England.

History of Compulsory Notification of Tuberculosis.—The first edict requiring compulsory notification of phthisis was issued by a king of Spain in 1751. The decree describes the motives for it, and enjoins destruction of the furniture and wearing apparel used by consumptives and replastering the room after a death. Physicians who fail to notify the alcalde of a consumptive patient or the death of a consumptive are fined 200 ducats at the first offense and suspended for one year, and for a second offense 400 ducats and exiled for four years. Nurses, servants and others waiting on the consumptive are required to see that the authorities are notified of the case under penalty of thirty days in prison for the first offense and four years at the galleys for the second. The edict also contains a paragraph directing that dealers in second-hand clothing must keep a record of the persons from whom the clothes are bought and to whom sold.

Organization for Prevention of Spread of Venereal Disease.—Although founded only last October, the German society organized for this purpose already has 1,600 members and has branches in nearly all the large cities of Germany. A similar society has recently been founded at Vienna. The German society held its first congress in March at Frankfurt a. M. The proceedings are to be published in detail in the newly founded "Zeitschrift für die Bekämpfung der Geschlechtskrankheiten," to be issued by the society in addition to its periodical, the "Mitteilungen." The "Zeitschrift" will be in charge of Blaschko, Lesser and A. Neisser, and be published by J. A. Barth of Leipsic; subscription $3. It will contain the more strictly scientific articles on the subject. Some of our exchanges think that the discussions at the March congress will be the starting point for extensive reforms in the prevention of venereal disease. Erb of Heidelberg created something of a sensation by protesting against the assumption that sexual abstinence is always "perfectly harmless," as he has observed isolated cases of neurasthenia and hysteria traceable to this cause in predisposed subjects.

Organization of the Profession in Germany.—Compulsory insurance of wageworkers against sickness has for some years been enforced in Germany. The sick fund societies, or "Krankenkassen," that assume the insurance make contracts with physicians for medical attendance of their members at the lowest possible rates, sometimes absurdly inadequate. A new law is before the Reichstag now which increases the length of the maximum treatment from thirteen to twenty-six weeks and requires venereal diseases also to be insured against. Hitherto the societies have ignored the venereal diseases. If this law goes into effect all the present contracts with the medical attendants of the societies will have to be modified to conform to the new conditions or otherwise the work of the physicians will be vastly increased without any more pay. The profession throughout the country has been organized, and there is every prospect that the day the law goes into effect, July 1, the medical attendants of all the societies will refuse to continue their services until new satisfactory pecuniary arrangements have been made, and other physicians will not take their vacant places. In short, the physicians have organized a general strike all along the line on the principle: "If you want peace, prepare for war." The societies have been counting on the usual inertia and lack of organization among physicians to accomplish their aims of the minimum of expense for the maximum of medical services, but the decided stand being taken by the united profession will undoubtedly have its effect and the contemplated strike not prove necessary. The strike at Mülhausen has been arbitrated and a temporary peace restored, but at Gera the conditions remain the same and the managers of the societies are compelled to pay for medical attendance for their members at the ordinary rates for a physician's services or let them go without. As a minor matter, the profession in Germany is working to introduce "the American plan" of free choice of the physician by the patient, and many of the new societies are organized on this basis.

LONDON LETTER.

Mr. Jonathan Hutchinson's Investigation of Leprosy in India.

The return of Mr. Hutchinson from India has been followed by a lengthy editorial and evidently inspired article in the "Times" on his tour of investigation. If Mr. Hutchinson can not be said to have established the fish hypothesis which he advocates with all his characteristic pertinacity, he has once more shown that combination of keenness of observation, originality of suggestion and dialectic skill which give him a unique position among the clinicians of this or perhaps any age. His searching cross-examination in the cases of lepers said never to have eaten fish with his recent suggestion that leprosy can be communicated from person to person by "commensal contagion" (eating food from the sore hands of lepers) has demolished the objection of those who said that Indian experience was opposed to him. Further, he has brought forward a number of new facts which at least ought to cause those who do not seriously regard the fish hypothesis to pause. Mr. Hutchinson visited asylums at Colombo, Madras, Calcutta, Purulia Asonsal, Agra, Tarn Taran, Jullundur and Bombay. In several instances the asylum visited was chosen in consequence of statements that the inmates were not fish eaters. But nowhere were the facts strongly opposed to the fish hypothesis. In Ceylon all had been fish eaters. At Madras and Calcutta in each asylum a single high-caste Brahmin denied having eaten fish. At Agra there was one doubtful exception. At Agra, Tarn Taran and Jullundur there were several. The untrustworthiness of the documentary evidence, if not subjected to criticism on the spot, was remarkably illustrated at one asylum in the Punjab. A tabulated schedule was prepared for Mr. Hutchinson by the native medical superintendent, according to which nearly 40 men alleged that they had never eaten fish. On questioning them one by one Mr. Hutchinson found that only one persisted in his denial, and he said he had not eaten fish because he "did not like it." The greater part of those who denied having eaten fish were patients in whom the disease had begun in early life; and in these food communication is especially likely to occur. Children would easily take food contaminated by the hands of leprous relatives. Passing from the removal of objections to positive evidence Mr. Hutchinson brings forward the following facts: The proportion of leprosy in the whole of India is 5 per 10,000. On the little island of Nunicoy, which exports fish, and where the inhabitants are said to eat four fish meals a day, the proportion is nearly 150 per 10,000. The records of the Matunga asylum at Bombay are most suggestive. The Hindus, who constitute the bulk of the inmates, come mostly from the great fishing district on the coast south of Bombay. During the eight years investigated no Jain and only one Parsee was admitted. The Jains are strict vegetarians and the same statement concerning their absence might probably be made of every asylum in India. The report of the Matunga asylum reveals a fact still more remarkable. One column is devoted to "Salsette Christians." The totals are Mussulmans, 324; Salsette Christians, 369. Yet the Mussulman population of Bombay Presidency is very large and the number of Salsette Christians very small. The latter term is applied to the converted natives of the little island of Salsette, which is north of Bombay and now connected with it by a road. It has a population of 50,000, largely engaged in fishing and fish-curing. The Salsette Christians are all Roman Catholics and are descendants of converts made by the Jesuits in the time of the Portuguese occupation and observe the fish fast days of their church. During the eight years no other Christian community in the presidency supplied a single leper to the asylum. Mr. Hutchinson's general conclusion is that as regards leprosy in India there are no facts which controvert or render untenable the fish hypothesis and that there are some which afford to it a support which he considers unassailable.

A New Method of Immunization.

A most important advance in the art of immunization has been rendered possible by the recent discoveries in physics by Professor Dewar which have lead to the liquefaction of air and other gases. At the Royal Society Dr. Allan Macfadyen described an investigation he had made in conjunction with Professor Dewar which promises a prophylactic and therapeutic agent in the treatment of typhoid fever, which may replace the anti-typhoid "vaccines" and anti-typhoid sera in use. So far all attempts to separate the toxin from the cell protoplasm of the typhoid bacillus have failed. Hence such "anti"-sera as have been produced are bactericidal or anti-bacterial and not actively antitoxic. For some years Dr. Macfadyen has been experimenting with bacteria which form intracellular or so-called "insoluble" toxins. He attempted at first to obtain the cell juices by trituration of the bacteria with fine sand and subsequent expression by a hydraulic press. But in all these operations heat is evolved and induces chemical changes in the juice obtained. Professor Dewar's observations on the liquefaction of various gases showed that at very low temperatures all chemical interchange ceased, although life was not necessarily destroyed. Dr. Macfadyen, working in conjunction with Professor Dewar, found that many species of bacteria could be exposed to the temperature of liquid air for considerable periods of time—in some cases as long as six months—without loss of vitality. At this temperature bacterial cells are frozen into hard fragile masses which can be successfully triturated *per se* without the possibility of autolytic changes, and the cell plasma can be subsequently obtained from the disintegrated mass. The cell juice obtained in this manner from the *Bacillus typhi abdominalis* is extremely toxic, although no living typhoid bacilli are present. This typhoid cell juice was employed in the immunization of animals which yielded an "anti" serum both bactericidal and also antitoxic. They were completely protected against lethal doses of living typhoid bacilli or of toxic cell plasma. Further animals inoculated with lethal doses of living bacilli or of toxin and some time later injected with curative doses of the "anti" serum recovered. This new method of immunization has wide possibilities for it is applicable to many infectious diseases.

The Bacteriology of Conjunctivitis.

At the Æsculapian Society Mr. E. W. Bremerton read an important paper on this subject based on an examination of 100 cases. His cases showed that in the various infections the risk of sloughing of the cornea was greatest in the following order: 1, streptococcus; 2, gonococcus; 3, staphylococcus; 4, diphtheria bacillus; 5, Koch-Weeks' bacillus, and 6, staphylococcus albus. Fifty per cent. of his cases of ophthalmia neonatorum were gonorrheal; and cases thought gonorrheal, which quickly recovered, were found to be pneumococcal.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, FIFTY-FOURTH ANNUAL SESSION, NEW ORLEANS, MAY 5-8.

Illinois State Medical Society, Chicago, April 29-May 2.
Arkansas Medical Society, Jonesboro, April 30-May 2.
Association of American Medical Colleges, New Orleans, May 4.
American Proctologic Society, New Orleans, May 5.
Kansas Medical Society, Concordia, May 6-9.
American Urological Association, New Orleans, La., May 8-9.
American Academy of Medicine, Washington, D. C., May 11-12.
American Therapeutic Society, Washington, D. C., May 11-13.
Oklahoma Territorial Medical Association, Guthrie, May 12.
American Association of Genito-Urinary Surgeons, Washington, D. C., May 12-14.
American Dermatological Association, Washington, D. C., May 12-14.
American Surgical Association, Washington, D. C., May 12-14.
American Orthopedic Association, Washington, D. C., May 12-14.
American Pediatric Society, Washington, D. C., May 12-14.
Association of American Physicians, Washington, D. C., May 12-14.
American Medico-Psychological Association, Washington, D. C., May 12-15.
American Ophthalmological Association, Washington, D. C., May 13-14.
Association of Military Surgeons of the United States, Boston, May 19-21.
New Hampshire Medical Society, Concord, May 21-22.
North Dakota State Medical Society, Bismarck, May 21-22.
South Dakota State Medical Society, Mitchell, May 27-28.
Connecticut Medical Society, Hartford, May 27-28.

American Academy of Medicine.—The twenty-eighth annual session will be held at Washington, D. C., May 11 and 12.

Caldwell County (Texas) Medical Society.—At the annual meeting in Lockhart, April 14, Dr. John B. Holt, Lockhart, was elected president, and Dr. Ross, secretary.

Dubuque (Iowa) Medical Society.—The notice of the coming semi-centenary meeting of this society, which appeared in The Journal of April 25, should have read "fiftieth" and not "fifteenth" anniversary.

Graves County (Ky.) Medical Society.—In addition to the officers noted as having been elected, Dr. Jefferson D. Pryor, Mayfield, was elected vice-president and Dr. Herbert H. Hunt, of the same city, treasurer.

Central District (I. T.) Medical Society.—At the annual meeting, held in South McAlester, April 14, Dr. Alfred Griffith, South McAlester, was elected president; Dr. W. H. Cleckler, Wilburton, vice-president, and Dr. LeRoy Long, Caddo, secretary and treasurer.

Hartford County (Conn.) Medical Association.—The one hundred and eleventh annual meeting was held in Hartford, April 15. Dr. Howard O. Allen, Broad Brook, was elected president; Dr. George R. Shepherd, Hartford, vice-president, and Dr. William G. Craig, Hartford, clerk.

Pee-Dee (S. C.) Medical Association.—At the fifty-sixth annual meeting held in Darlington, April 8, Dr. F. H. McLeod, Florence, was elected president; Dr. A. T. Baird, Darlington, vice-president; and Dr. James M. Earle, Darlington, secretary and treasurer. The next meeting will be held in Florence, in October.

Silver Bow County (Mont.) Medical Association.—At the annual meeting, February 25, the following officers were elected: Trustees, Drs. Thomas J. Murry, Thomas J. Sullivan, John W. Gunn, Erasmus D. Leavitt, and Thomas A. Grigg; president, Dr. Thomas J. Sullivan; vice-president, Dr. Louis Bernheim, and secretary, Dr. Grace W. Cahoon, all of Butte.

Central Railroad of Georgia Surgeons' Association.—The annual meeting was held in Columbus, April 14. Resolutions were adopted on the death of Drs Benjamin R Dostor, Blakely, Ga, and Robert F Harper, Ozark, Ala Dr Samuel C Benedict, Athens, was elected president, Dr Charles Hickes, Dublin, Ga, vice president, and Dr W Darracott Travis, Covington, Ga, secretary and treasurer

Fairfield County (Conn) Medical Society.—About fifty members were present at the one hundred and eleventh annual meeting held in Bridgeport, April 14 Dr William B Cogswell, Stratford, was elected president, Dr Frederick Schavoir, Stanford, vice president, Dr Herbert F Smyth, Bridgeport, clerk, Dr Edwards M Smith, Bridgeport, secretary, and Dr William J Tracy, Norwalk, county reporter

Florida Medical Association—The thirteenth annual meeting was held in St Augustine, April 8 and 9 The following officers were elected· Dr DeWitt Webb, St Augustine, president, Drs John McDiarmid, De Land, and Joseph N Fogarty, Key West vice presidents, Dr J D Fernandez, Jacksonville, secretary treasurer, and Dr Edward N Liell, Jacksonville, librarian The 1904 meeting will be held in Live Oak

Medical Association of Georgia—The fifty fourth annual meeting was held in Columbus, April 15 The following officers were elected Dr Henry McHatton, Macon, president, Drs James H McDuffie, Columbus, and Elmer C Thrash, Oakland, vice presidents, Dr Alexander Mack, Hawkinsville, censor, and Dr. Floyd W McRae, Atlanta, delegate to the American Medical Association The next meeting is to be held in Macon

New Mexico Medical Society—This society met for its twenty second annual session at Las Vegas, April 7 The following officers were elected Dr G C Bryan, Alamogordo, president, Drs Edwin B Shaw, East Las Vegas, T B Hart, Raton, and Samuel D Swope, Deming, vice presidents, Dr J Frank McConnell, Las Cruces, secretary and delegate to the American Medical Association, and Dr George W Harrison, Albuquerque, treasurer

Adams County (Ill.) Medical Society—The annual meeting was held in Quincy, April 13, when the following officers were elected: President, Dr William W Williams, Quincy, vice presidents, Drs Amos D Bates, Camp Point, and Henry Hart, Quincy, secretary, Dr John A Koch, Quincy (re elected), treasurer, Dr Levin H A Nickerson, Quincy (re elected), censors, Drs Joseph Robbins, Charles D Center and Robert J Christie, Jr, all of Quincy, delegate for two years to the state society, Dr Edmund B Montgomery, Quincy, and alternate, Dr William E Gilliland, Coatsburg

FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

Held in Madrid, Spain, April 23-30, 1903

The President, M le Prof Julian Calleja y Sanchez, presiding

[*By Cablegram from our Special Correspondent*]

MADRID, APRIL 24, 1903

The Fourteenth International Congress of Medicine opened in Madrid, Spain, Thursday, April 23 The organization and provision for the reception of members was miserable, and hotel accommodations inadequate Many passengers on the "Irene" arrived late, being detained in Seville

The Opening Sessions.

On Thursday afternoon the inauguration in the Opera House was attended by King Alphonso XIII and the queen mother

The attendance, as announced by the Secretary, M le Dr Angel Ferandez Caro, was 7,000, about half of whom were foreigners The United States was seventh in attendance, with 200 present

President Calleja, in his opening address, emphasized the progress of the century, laying special stress on the cell doctrine, and the theory of epigenesis in relation thereto He considered that perhaps the greatest advance was in bacteriology, which now dominates medicine

Congratulatory addresses were made by Leyden, Schroetter, Brouardel and Pavy.

The second day was largely given to organization and election of officers The general reports were for the most part postponed

Social Entertainment.

The evening of the first day closed with a grand ball, 500 delegates being present, in the City Hall Among the other social events was a full dress reception, on Friday evening, in the palace by the king and queen On Wednesday evening a party was given in the Royal Gardens Saturday there was an excursion to the Escurial [This is an immense monastery outside Madrid, considered one of the wonders of the world] On Sunday a special bull fight was given for the benefit of the visitors, and on Monday an excursion to Toledo

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THE SCIENTIFIC·PROCEEDINGS

The most important papers were in pathology, medicine, obstetrics and gynecology

Treatment of the Autointoxications Due to Overaction of the Nervous System.

Prof Alexandre de Poehl of St Petersburg described a vicious circle in nervous autointoxications in which the chief agent is adrenal Deficient tissue oxidation sets free a number of organic acids in the blood Poehl has found adrenal in many tissues, it is dissolved out by the hyperacid blood serum and, as a reducing agent, still further intensifies the acidification of the blood Senator has recommended spermin for this condition for the reason that it best combats the hyperacidity

A New Antipyretic

Lumiere and Chaumier read a paper on cryogenine, which is a semicarbazide This is a powerful antipyretic, the dose being from ½ to ¾ gram It lowers the temperature from one to three degrees, acting immediately, while the maximum effect is obtained in three hours The effects last from six to forty eight hours The results vary with the nature of the disease There was not found any disturbance of urine, digestion or of the nervous system even of the child, nor is a toleration established

Tuberculosis

Dr Regurier of Nice presented a paper on "The Clinical Types of Pulmonary Tuberculosis and Their Therapeutic Indications" For rational and scientific treatment one must have an accurate clinical subdivision of the various types The only logical basis for such a subdivision is the degree of resistance which the organic economy opposes to the microbic infection There are three grades of reaction of the organism: 1, unbending resistance, 2, less firm resistance, and 3, entirely inadequate resistance On this basis the author suggests a very complete regrouping of the various clinical types hitherto generally recognized

The Dynamogenic or Inhibitory Action of Light Massage.

Dr Saquet of Nantes read a paper on the comparative dynamometric measurements of the power of the hands taken before and after massage had been administered As a rule there is an increase in power, in other cases there is apparently a diminution in the register of the dynamometer, but even in such cases the equilibrium is generally restored within a quarter of an hour

Physicotherapy; Its Indications and Its Advantages.

Prof J Riviera of Paris praised most highly the physicotherapeutic agents, viz, electricity, heat and light They act principally by stimulating the emunctory organs, by altering metabolism and by influencing the distribution of the blood to the various parts of the body They are particularly of value in the treatment of city diseases such as gout, arthritism, dyspepsia, nervosity, all types of dystrophy, "uterine patients," and all the many chronic cases which have hitherto resisted medical treatment

Ferruginous Waters for Chlorosis.

Dr E Guilleaume of Spa said that the same circulatory conditions which give the subjective symptoms of chlorosis prevent the proper assimilation of iron as a medicine The ferruginous baths (carbonic acid gas) rapidly improve the general condition by improving the circulation, and so, without directly affecting the hemoglobin, further a cure by rendering possible the assimilation of the iron given internally.

Argon and Helium in Mineral Waters.

Dr. A. Popskin said that argon and helium, the recently discovered elements, have been identified in various waters, Cauterets, Harrowgate, Voslau, etc., but as they do not appear to enter into the biochemical processes and can not be recovered from animal or vegetable bodies by analysis, they, therefore, probably exercise no therapeutic action in the waters.

Syphilis and Hydrotherapy.

Dr. H. Keller of Reinfelden said that physiotherapy is as important as medicine in the treatment of syphilis. This treatment comprises hygiene, hydro-mineral treatment and hydrotherapy. They should be combined for syphilitics who are of the lymphatic or arthritic constitution, or anemic or debilitated. In the severe cases, it is really specific. It is indicated in cases of idiosyncrasy against mercury. Sulphurous, chlorinated and iodid springs are of especial value.

Tuberculosis and Hydrotherapy.

Dr. M. Cayeux of France said that certain waters, by their stimulating action, serve to fortify the organism against the attacks of the bacteria, while, by their peculiar composition, they combat the catarrhs, congestion and other "para-tuberculous" manifestations of the disease. He detailed the special indications for various types of waters.

The Causes of Tumors.

In the section on pathology, Doyen of Paris read a paper on "The Micrococcus Neoformans and Tumors." He said that all neoplasms are due to parasitic infection, the process being analogous to the inflammatory growth of actinomycosis. The neoplasms of rapid growth are due to the *Micrococcus neoformans*, which has been found in the growth. Pure cultures have been made on bouillon, and when inoculated into animals inflammations or neoplasms have been produced in them. He further stated that the toxins produced a reaction in cancerous individuals analogous to the action of tuberculin.

Parasites and Tumors.

Rio of Madrid described a type of sarcoma due to coccidia as well as granulomata of chronic growth, with central necrosis. These involved the skin, muscles and organs.

The subject was further discussed by Dr. O. Israel of Berlin, who reviewed the modern theories of parasitism in tumors. He said that tumors represent simply the reaction of the tissues to an unnatural stimulus, which leaves the supposition of a uniform etiologic factor without sufficient basis. The sarcoma, carcinoma, etc., are caused in the same manner, but by a very different stimuli. If, however, ectogenous parasites are proved to be the actual causative factors, it must be by demonstrating that they conform to the requirements laid down by Koch. The first one, inoculation, appears to have been proven, but reproduction of the disease has not. The second requirement, detection of the germ, has not been met. Israel declared that the plant parasites which are found are commensals rather than the direct cause, and the animal parasites are artefacts. Koch's third requirement, pure cultures, has never been satisfied as regards the protozoa.

Finally, the production of neoplasms by the inoculation of cultures has never succeeded, apparent successes being in reality inflammatory neoplasms. The true explanation of tumors is to be sought in cytobiologic conditions--pathologic increase in the proliferative tendencies of the cell.

Blastomycetic Lesions.

Dr. A. Bushke reviewed our knowledge on blastomycetes. Especial attention was paid to the *Oidium mycosis* of the Americans. Infection is through the skin and mucosæ, probably through lesions, but the mode has never been ascertained. There are three types: 1, blastomycetic septicemia; 2, localized infection, and 3, the typical, slow-growing blastomycosis. Dr. Bushke described the various modifications of the latter type in detail and gave their pathology. Because of its great tendency to internal metastases, the disease is more fatal in man than in animals.

Artificial Imitation of Pathologic Cell Conditions.

Dr. Unna of Hamburg showed how the various types of cytoplastic and raryoplastic degeneration might be induced on the microscopic slide by means of the action of various solutions.

Specific Sera.

Paltauf of Vienna emphasized the value of agglutination in order to determine the specificity of germs. The sera of horses immunized by streptococci of scarlatina by Moser agglutinated the same cocci in high dilution, but did not have this effect on the cocci of erysipelas or phlegmon.

Implantation of Bone.

Cornil of Paris declared that his investigations showed the announcements of Bartels to be premature. Bartels had said that his researches showed that pieces of dead and living bone were equally efficacious. Dr. Cornil said that both implantations are absorbed and replaced by fresh tissue, but in the case of living pieces granulations are more active and abundant. His experiments had been on the craniums of dogs.

Malaria.

Drs. Barrera and Pittaluga of Spain made important contributions on paludism. They claimed that Grassi, not Ross, was the real discoverer of the transmission of the ameba. The three varieties, quartan, tertian and estivo-autumnal, are due to separate species, and the recrudescenes of malaria are "bridges" which unite successive seasonal epidemics. Following the parthenogenesis of the organisms they seek the internal organs, where they remain during the latent periods. This is exemplified by the crescents. The multiplication takes place by a nuclear division, generally in June; thus young mosquitoes are reinfected. The quotidian type may be due to the estivo-autumnal variety or to a rapid development of the tertian or an independent type.

Acute and chronic estivo-autumnal varieties are the most diverse. He described the hydrographic conditions which suit the plasmodium. Prophylaxis directed toward extinction of the mosquito is most expensive and inefficacious, but mechanical protection of man is efficacious. Paludism in man is the proper point of attack. Quinin is best given during the latency of the disease in winter.

Ascoli of Rome emphasized the importance of studying the recrudescences in Italy. An epidemic of malaria appears annually at a time in June when there are relatively extremely few infected mosquitoes. Many cases have a malarial history.

There are two types of recrudescence, with brief and long intervals, the former being due to imperfect extinction, the latter to parthenogenesis. The latter connects successive epidemics. He emphasized the fact that mosquitoes are always born healthy, but man is the permanent host.

Dr. F. Hauser of Madrid argued that the anopheles do not furnish the only intermediate host for the malarial parasite. Under favorable conditions the germ might live in humid earth in some unknown form, and the disease might flourish in regions free from mosquitoes. From the earth it may be conveyed by the air or by mosquitoes to the blood; for example, the inhalation from dried marshes or the drinking of water infected by the bodies of dead mosquitoes could infect. Mosquitoes dying in marshes set free the organism, which then infects man through the medium of the air.

Obligatory Report of Tuberculosis.

In the section on hygiene, epidemiology and technical sanitation Dr. H. Tabor of Prague recited six very strong arguments for the general prophylaxis of tuberculosis, based on reports of every case of tuberculosis, of death from the disease, or of change of lodging of diseased persons.

The Intellectual Life.

Dr. L. Bares of Saint-Gandens said that intellectual labor predisposed to digestive disturbances, to disturbances of nutrition, and to nervous break down. A severe alimentary hygiene was recommended, excluding rich indigestible foods as well as alcohol and tobacco. Exercise in the open air, open bowels, an active skin, and the drinking of milk are essential for the brain-worker. Sleep is the criterion of the nervous condition and should be undisturbed.

Hysterectomy in Acute Infections.

In the section on gynecology and obstetrics, Dr. Pinard of Paris read a paper on the above subject. He said that except for definite cause, such as trauma or putrifying fibroma, there is no rational indication for removal of the uterus. The autopsy never reveals localized lesions in the uterus. The presence of bacteria in the blood does not affect the prognosis. The bacteriology of uterus is valueless clinically for it is impossible to localize the infection in the uterus or to determine the advisability of operation.

Cortajena of Madrid said that general infections diminish the importance of the uterus as the primary agent. Chronic infections never justify hysterectomy. The proper moment for operation is almost impossible to determine. He urged conservative surgery of the adnexa.

Treub of Amsterdam said that radical operations have a mortality of 6 per cent. and do not guarantee cure. Such cases have prolonged disagreeable consequences. Conservative operations have a mortality of two per cent. and generally suffice, but may demand secondary operations. They never induce constitutional disturbances. For salpingo-oöphoritis medical treatment generally suffices, but if not, repeated posterior colpotomies are preferable. In rebellious or sterile cases conservative abdominal operations were advised, but not excision, while for tuberculosis hysterectomy must be made.

The other sections have only organized or listened to unimportant papers.

(To be continued.)

BOSTON SOCIETY OF MEDICAL SCIENCES.

Meeting held at Harvard Medical College, April 28, 1903.

Prof. H. C. Ernst in the chair.

[By telegraph from our Regular Correspondent.]

Discovery of the Germ of Smallpox.

More than five hundred of the prominent members of the medical profession of Boston gathered in the largest amphitheater of the Harvard Medical School to hear Prof. W. T. Councilman make his announcement of the discovery of the germ of smallpox. Dr. Councilman stated that for two years the study has been carried on under his supervision by Drs. Brinckerhoff, McGrath, Tyzzer and Thompson in the laboratories of the Smallpox Hospital at Galloupes Island and in the Detention Hospital on Southampton street, with the cordial cooperation of the Boston Board of Health.

All the material obtained was brought to the Harvard Medical School and thoroughly studied there. First vaccinia was studied and then the contents of the vesicles and pustules, but no definite germ could be here detected because of the vast number of bacteria of varying kinds always present. Finally an anatomic study of the lesions of the disease revealed the organism with its definite cycles of development. In the deep epithelial cells of the skin there were found bodies one micron in diameter, which have also been noted by other observers. They stain easily, are homogeneous, increase in size, their structure gradually becomes granular, their shape irregular, and they are surrounded by little circles more or less resembling amebæ. Occasionally segmentation is evident, the organism splitting into a number of segments.

This is a distinct cycle. There is no change in the nuclei, a vacuole surrounds the organism and grows with it. Suddenly it disappears and peculiar changes are noted in the nuclei, a ring appears and grows, rings appear in its periphery and its structure becomes sponge-like. This finally fills the whole nucleus, which degenerates and sets free the body. It does not much further increase in size, but the structure becomes more complex, the ring-shaped bodies appear, one micron in diameter, and it breaks up into these "spores." We thus have, as in other protozoa, two cycles, the intracellular and the intranuclear, the latter more complex and corresponding to sexual development.

In vaccinia we have only the first cycle, and this is the case also when the rabbit is exposed to smallpox. The monkey being nearer to man, however, gives both cycles. The whole process is complete when the vesicles begin to form. These stages are not found in the vesicles, pustules or crusts, but the "spores" have been found in the blood vessels of the skin. These are probably not the only cause of the later eruption, but prepare the way for the streptococci. Professor Councilman showed a beautiful series of lantern slides made from microphotographs which fully and clearly substantiated each of his statements.

Professor Calkins, professor of zoology at Columbia University, was present and agreed with Professor Councilman in believing the organism a protozoan. He warmly congratulated Professor Councilman and his associates for their investigations and discoveries, and specially noted the advantages of the discoveries in aiding the early diagnosis of the disease. If the organism can be found in the epithelial cells or the blood instead of our having to wait fourteen days for the eruption to appear, valuable time would be saved and the possibilities as regards treatment are evident. The organism belongs to the class of microsporidia.

Miscellany.

Clippings from Lay Exchanges.

LUCKY HE IS NOT ALSO.

"Mr. ——— — ——— is going . . . to have another amputation performed on his limb, as it will not heal on account of the bone being deceased."—"La Junta (Colo.) Democrat," Nov. 29, 1902.

HOW DID HE RECOVER FROM A MORTAL WOUND?

"Dr. — — ———, who was mortally wounded . . . and whose life hung in the balance for weeks, has fully recovered and resumed the practice of his profession."—"Burlington (Iowa) Hawkeye."

WHERE DID HE WEAR IT?

"Ottumwa, Iowa, Oct. 23, 1902.—Because her husband threw a bucket of water on her while she was asleep, . . . Mrs. ——— ——— procured a shotgun and blew her husband's stomach off."—"Chicago News."

SOME ARE.

"The ——— County Medical Association met. . . . Written papers were read by . . . and by Dr. ——— on antepartum and postpartum hemorrhoids."—"Memphis (Tenn.) Commercial-Appeal," April 8, 1903.

TRACHEO-ESOPHAGEAL ANASTOMOSIS?

"Coughs up a Luzon worm. . . . His stomach had been the home of . . . worm . . . with a most peculiar swelling at the neck. . . . This was undoubtedly the part by which the worm got caught in his windpipe when he began to cough it up."—"Brooklyn Eagle," April 18, 1903.

Professional Secrecy in the French Courts.—The "Journ. de Méd. de Paris" of November 9 gives the particulars of a recent suit involving a physician, which has caused much discussion in France. Dr. A. has for twenty years been the official duly appointed by the municipal authorities of Marseilles to pass on and certify the applications for committing insane persons to asylums. In a recent case a man was sent to an asylum, but was released after his attack of insanity had subsided, and sued his wife for having had him unjustly declared insane. She cited as witnesses the attending physicians, among them Dr. A. The latter, believing that his certificate was a public matter, knowing that it had passed through a number of hands, did not hesitate to testify to the effect of its contents. The husband at once sued him for $4,000 damages for violation of professional secrecy. The local court acquitted Dr. A., as it was generally understood that his certificate was a quasi-public matter, but the case was appealed, and the higher court decided against him, claiming that he had certainly violated professional secrecy in the affair.

Eruption from Confetti.—Foveau de Courmelles recently reported to the Paris Acad. de Méd. a case of a cutaneous eruption produced by confetti. The probable mode of poisoning was by the penetration of the anilin dyes from the confetti alighting on cracks in the lips.

Experimental Hypnotism; Effect on Circulation.—Berillon contributes an article on this subject to the "Journ. de Med. de Paris," describing the effect of hypnotism on several hysteric subjects, including those otherwise sound and those with functional circulatory disturbances. The sphygmograms show a remarkable influence of the circulation under the suggestion by the hypnotizer. The pulse and also the heart action could be retarded, accelerated or rendered regular at will, and the arterial tension modified. He also mentions that one of his friends, in a series of sphygmographic researches on himself, was alarmed to discover, after a time, marked arrhythmia, which, however, subsided so soon as he abandoned his researches. The close concentration of the attention directed by suggestion on certain organs, certain functions or certain parts of the body, leads to an actual polarization of the nerve force at this point. In one case of traumatic neurosis, with palpitations, arrhythmia and incessant tremor, all these symptoms subsided in the hypnotic sleep, as also the pronounced tachycardia in another case.

Ankylostomiasis in Cuba and Mexico.—Physicians in these two countries are awaking to the realization of the fact that the numerous cases of progressive anemia observed there and hitherto assumed to be malarial cachexia are, in reality, in many instances true ankylostomiasis. Agramonte describes his experience at Havana in the "Revista Med. Cubana," 1, No. 4. He found the *Uncinaria americana* in 16 cases of progressive anemia, 12 of which had been previously diagnosed as malarial anemia or cachexia and 3 as splenic anemia. He reports the clinical course of a few cases and illustrates the differences between this form of the uncinaria and the better known *U. duodenalis*. Manuell has had a similar experience in Mexico, having found 5 cases of ankylostomiasis in a brief time so soon as he commenced to examine for it. He remarks that these cases in the past have probably been cited as examples of the failure of quinin in certain manifestations of malaria. Two of his patients had been employed in Yucatan, 2 in the tobacco fields of the national valley and 1 came from a mining district. The trichocephalus accompanied the parasite in every instance, and in one case ascarides were also present. He mentions in his communication to the "Revista Médica" of Mexico, xiv, 11, that no one before has ever mentioned finding the trichocephalus in Mexico.

Aqueous Preparations of Menthol.—Blondel found that if menthol were given to a dog at the same time or shortly after an emetic dose of ipecac, there was no vomiting. Chauffard also noted that ipecac given with menthol failed to produce an emetic effect. This power to inhibit vomiting renders menthol very valuable in vomiting of reflex origin. Crêsantignes gives several formulas in the "Journ. de Méd. de Paris" for preparing an aqueous solution of menthol. Ordinarily it does not dissolve in water. He uses the tincture of quillaja saponaria, 5 gm. to 3 or 5 cg. of menthol, adding, after they are mixed and the menthol is dissolved, 10 gm. of neutral glycerin in distilled water q. s. to make 125 c.c. This is taken by the tablespoonful. For local application in case of frontal headache, he applies a mixture of 15 to 30 cg. of menthol dissolved in 10 gm. of tincture of quillaja and distilled water to make 155 c.c. This is applied on a folded compress. After three to five minutes the compress is replaced by one dipped in pure water, after which the menthol compress is applied again, and so on. For a mouth wash and gargle he prefers the formula: menthol 10 to 20 cg. in 20 gm. tincture of quillaja and distilled water, or a saturated solution of boric acid q s. to make a quart. The "Medical Standard" says that the first formula given "illustrates the absurdity of some of the prescriptions recommended in the journals for medicinal use. This mixture is to be used as a gastric sedative. The addition of the quillaja defeats this very end, since it is a decided, often a violent irritant; it is an active poison—a cardiac depressant, and a bill forbidding its use as a foam-producing ingredient of soda fountain drinks has been introduced in at least one state. The art of the pharmacist has in this case over-shadowed the practical end of the physician, who, as a matter of fact, would find the simpler spirit of peppermint or peppermint water just as effective."

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

CAUSE OF DEATH WANTED.

WATERTOWN, S. D., April 16, 1903.

To the Editor:—The following case has proved somewhat of a conundrum to me especially as no postmortem examination was allowed.

Cecil G., about 5 years of age, with a previous good history except a recent recovery from a mild attack of la grippe, was placed under chloroform anesthesia for the purpose of removing enlarged tonsils. The anesthesia was not complete, first, because the operation was expected to be of such short duration that it was not deemed necessary to take the time; second, in consequence of some danger to blood getting into the bronchi if reflex was entirely abolished.

One tonsil was easily removed, but some difficulty was experienced in getting the other engaged in the tonsillotome, principally in consequence of the contraction of the throat, and finally it was seized by a vulsella and removed with serrated scissors.

The child was immediately inverted to facilitate the flow of blood from the mouth, the child meanwhile struggling and crying with returning consciousness, when it suddenly stiffened and breathing and heart action ceased at almost the same instant.

Artificial respiration for over an hour, with subcutaneous injections of normal saline solution, failed to obtain any result. What would be supposed to be the exciting cause of death?

H. H. CLARK.

Correspondence.

Priority in Technic.

BROOKLYN, April 20, 1903.

To the Editor:—In the April 4 number of THE JOURNAL one of your contributors, in an article entitled "A Few Practical Points in the Technic of Nephrorrhaphy and Herniotomy, and a New Modification of Alexander's Operation," publishes, as his own, three operative procedures so long identified with the names of other surgeons that I can not forbear calling your attention to the fact.

In the second paragraph of his article your contributor states that he has employed the methods described since 1890, claiming originality, by implication, for the latter and dating the claim from the time mentioned. It may be true that Dr. Canac-Marquis was the first to apply the "crossed" or figure-of-eight suture in nephrorrhapy, although, if my recollection serves me right, I used it in the winter of 1889 and 1890 in perineorrhaphy, nephrorrhaphy, herniotomy and for the closure of abdominal and other incisions in general. This part of the subject is unimportant, however, since this was the period of development of the possibilities of the "crossed" or removable layer suture in my work, and prior to any publication of my own on the subject, or, so far as I then knew, of the publications of others as well. Since, also, your contributor does not employ the figure-of-eight suture to anchor the kidney, but only to close the wound and since, further, he does describe its use in closing the wound of the herniotomy operation, I feel that failure to give credit for these applications of the method justifies the present contribution.

In the transactions of the American Surgical Association for 1891 there appeared my first communication relating to a removable layer suture, illustrated by woodcuts. This suture was again described, with a modification relating to the method of finally securing the ends of the suture. Still later the method was again described in illustration of its application to the closure of the wound of the abdominal wall following the operation for appendicitis in a "Treatise on Appendicitis," edition of 1894. In the 1900 edition of the latter work this suture, together with a still further modification of the method of securing its ends, is again described and illustrated. Quoting from the first of these, I said:

> It occasionally happens . . . that the different layers of tissue passed through in the course of the operation must be sutured separately in order to insure a good result. Here catgut will not answer, for the reason that it is dissolved or, at all events, weakened, before it has answered its purpose, and the sutured layers separate widely in spite of every care. To meet the requirements of these cases I have devised a suture which, while it serves all the purposes of a deeply buried layer suture, at the same time can be removed. I have called this the "crossed suture." Silkworm gut or silk may be used for this purpose, but the former is preferable. Both ends of the thread are threaded with needles of the proper curve, and both are passed beneath the lowermost or the deepest layer to be sutured, at sufficient distance from the edge to obtain a good hold thereon. As the thread is drawn through either edge of the layer, the loop is drawn taut beneath. The thread is now crossed, the needle which passed the latter through the outer edge crossing over the inner edge, and that which passed the thread through the inner edge going to the outer. The needles are now passed through the next layer as before, from below upward, securing a firm hold as in the first layer.
>
> The threads are again drawn taut and crossed as before, each time of crossing securing a layer until the surface is reached, the last layer, of course, being formed by the skin itself.

While Dr. Canac-Marquis concludes his operation by the use of "a lead nickel-plated shield threaded and shotted," I have for some years attained the same result in a slightly different manner. Quoting from my book, "A Treatise on Appendicitis," 1900:

> The crossed sutures are tied in pairs on either side of the wound. In order to guard against cutting of the skin from the silkworm gut, the sutures are tied over "bolsters" of sterile gauze or, what I find exceedingly convenient for this purpose, sections of thick-walled tubing of soft rubber (aspirator tubing) are used, the silkworm gut being passed through the lumen of the tubing. . . . This method gives all the advantages of buried layer sutures, and yet places completely within control the length of time the sutures are to remain in place. . . . Removal is accomplished by cutting the suture beneath the bolster on one side, and making traction on the other end of the thread.

While my first article was in the hands of the printer, and after I had employed the method of thus placing a removable layer suture in practically all the situations in which it is applicable, Well's translation of the first edition of Pozzi's work on gynecology appeared. I then became aware, for the first time, through a very scant reference to the matter by Pozzi (Vol. II, pp. 980, 981), that a similar suture had been described by Heppner for the perineum.

Taking up, next, Dr. Canac-Marquis' "Technic of Herniotomy for Radical Cure of Hernia": Bryant, as far back as 1889, advocated the use of the hernial sac itself to form a pad of resistance to intra-abdominal pressure. In the "Transactions of the New York State Medical Association," 1889, under the heading "Treatment of Hernia," Dr. Bryant says:

> I can not close this portion of the subject without calling to your attention a somewhat newer method of operating that I have practised on three distinct occasions. It certainly has some features that commend it. . . . It is performed by weaving the sac. after its separation and its neck has been tied with catgut, into the pillars of the ring.

He then illustrates slits through which the sac is woven back and forth, "and finally the whole mass is quilted with deep stitches of catgut."

Though the details of Bryant's old operation, since abandoned, differs somewhat from your correspondent's, still the fundamental principle involved remains the same, and, "honor where honor is due."

In regard to Dr. Canac-Marquis' "New Modification of Alexander's Operation for Shortening the Round Ligaments," I would recall to your attention the fact that in the "Annals of Surgery," 1896, occurs a paper by Robert Abbe, entitled "Fixation of Round Ligaments in Alexander's Operation." After referring to a previous method of his own, Abbe says:

> The idea occurred to me of utilizing the round ligament itself for the double purpose of sewing up the inguinal canal and securing the ligament immovably.
>
> This, I found, was easily accomplished when the ligament was drawn out four inches, as was always readily done. . . . The ligament was drawn on until the uterus was firmly held well forward. The needle and loop now drew the ligament through new punctures on either side of the canal, crossing it to become a continuous suture for the canal. Three such stitches completely closed the canal up to the spine of the pubis, and left more than an inch and a half of ligament over. This was turned back over the last portion of the wound and stitched to it by one fine catgut stitch. . . .
>
> The use of living tissue as a suture thus serves the double purpose of fixing the uterus immovably and binding the canal permanently.

This is identical with your correspondent's method, except in the minor details of closing the superficial structures.

Unless your contributor can substantiate his implied claim as the originator of these three points in technic by publications bearing date earlier than 1889 in the case of the hernia operation, 1891 in the case of the removable layer or figure-of-eight suture, and 1896 in the case of the modified Alexander's operation, the credit of the method of weaving the pillars of the ring together by means of the sac itself should be given to Bryant, that of a removable suture to Heppner and myself, and that of employing the round ligament to close the inguinal canal and at the same time secure the uterus in position in Alexander's operation to Abbe.

GEORGE RYERSON FOWLER.

Marriages.

CHARLES P. PINCKARD, M.D., to Miss Mary Losey Graff, both of Chicago, April 25.

J. JULIUS RICHARDSON, M.D., to Miss Dorothy Flynn, both of Washington, D. C., April 20.

HUGH G. NICHOLSON, M.D., to Miss Roberta Coleman, both of Charleston, W. Va., April 16.

TASSO OLIVER FELIX, M.D., Downs, Kan., to Miss Neva Lee Trusdle of Kirwin, Kan., April 16.

WILLIAM A. CAMPBELL, M.D., Chicago, to Miss Jeannette E. Halsted, at Muskegon, Mich., April 15.

Deaths.

Matthew Gardner, M.D. McGill University, Montreal, 1871, a member of the American Medical Association; chief surgeon of the Southern Pacific Railway system; a member of the California State and San Francisco County medical societies; eminent in his profession and universally beloved, died at the Southern Pacific Hospital, San Francisco, April 18, a few hours after an operation for appendicitis, aged 56. He leaves an estate of a value estimated at from $75,000 to $80,000.

Joseph S. Eastman, M.D. Missouri Medical College, St. Louis, 1878, one of the founders and first president of the Oakland College of Medicine and Surgery, and a member of the state and county medical societies, died at his home in Berkeley, Cal., April 19, after an illness of six months, aged 48.

Henry Clinton Bunce, M.D. Medical Institution of Yale College, New Haven, 1850, assistant surgeon of the First Connecticut Heavy Artillery in the Civil War, died at his home in Glastonbury, Conn., April 15, after a protracted illness, aged 78.

William Flood Smith, M.D. College of Physicians and Surgeons, Baltimore, 1889, and thereafter professor of anatomy in the same institution, died from pneumonia at the Protestant Infirmary, Baltimore, April 14, after a short illness, aged 38.

John M. Allen, M.D. University of Pennsylvania, Philadelphia, 1840, surgeon of the Fifty-fourth Pennsylvania Volunteers in the Civil War, died at his home in Chester, Pa., from paralysis, after a short illness, April 20, aged 84.

Charles L. Howard, M.D. Medical College of Indiana, Indianapolis, 1896, of St. Paul, Ind., was instantly killed in a collision between an automobile which he was driving and a street car at Indianapolis, April 18.

John F. Gaylord, M.D. Medical Institution of Yale College, New Haven, 1878, a member of the Samoset Medical Association, died at his home in Plymouth, Mass., April 14, after a lingering illness, aged 45.

Sherman Hartwell Chapman, M.D. College of Physicians and Surgeons, New York, 1869, a specialist in diseases of the throat and lungs, died at his home in New Haven, April 15, from heart disease, aged 59.

James M. Brown, M.D. Jefferson Medical College, Philadelphia, 1875, a member of the American Medical Association, died at his home in Philadelphia, April 11, after an illness of several months.

L. Hart Kitchel, M.D. University of Buffalo, 1870, died from concussion of the brain and spine, resulting from a fall two months before, at his home in Alden, N. Y., April 20, aged 57.

Andrew G. Selman, M.D. Transylvania University, Lexington, Ky., 1843, a surgeon in the Civil War, who retired from practice in 1893, died at his home in Indianapolis, April 17, aged 81.

Arthur Jones, M.D. Jefferson Medical College, Philadelphia, 1898, of Bellevue, Ohio, died at his mother's home from pneumonia, April 15, after an illness of one week, aged 37.

Cornelius H. Woodcox, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1890, of Coldwater, Mich., died from heart disease at Gilead, Mich., aged 59.

Uriah M. Gibbs, M.D. University of Nashville, 1897, died at his home in Hanceville, Ala., from the effects of strychnin taken in mistake for calomel, April 18, aged 33.

William M. Griffith, M.D. Hahnemann Medical College, Philadelphia, 1872, died at his home in Philadelphia, April 20, from pneumonia, after a short illness, aged 53.

Frank B. Williams, M.D. New York Homeopathic Medical College and Hospital, 1884, died at his home in Brooklyn, N. Y., from Bright's disease, April 19, aged 39.

William S. Robertson, M.D. Medical College of Virginia, Richmond, 1854, died at his home near Mount Hermon, Va., April 21, after a short illness, aged 72.

Samuel H. Kaighn, M.D. Medical College of Ohio, Cincinnati, 1866, died at his home in Leesburg, Va., April 13, from influenza, after a short illness, aged 69.

Morton M. Dowler, Jr., M.D. Rush Medical College, Chicago, 1865, died at his home in Topeka, Kan., April 13, from consumption, after a long illness, aged 69.

Frederick A. Sweet, M.D. New York University, 1889, chief surgeon of the El Paso and Northeastern Railway, died at his home in Bisbee, Ariz., April 17.

Denman R. Kinsell, M.D. Homeopathic Hospital College, Cleveland, 1857, died at his home in Columbus, Ohio, April 17, after a long illness, aged 75.

Leonard Kittinger, M.D. Hahnemann Medical College, Philadelphia, 1863, died from pneumonia at his home in Wilmington, Del., April 17, aged 68.

George M. MacMillon, M.D. Ohio Medical College, Cincinnati, died April 16, at Sewickley, Pa., from consumption, after an illness of nine months.

A. C. Porter, M.D. Philadelphia University of Medicine and Surgery, 1870, died suddenly at his home in Ashford, N. Y., March 26, aged 67.

Thomas Jefferson Elam, M.D. University of Nashville, 1858, died suddenly from apoplexy at his home near Rucker, Tenn., April 20, aged 71.

Daniel H. S. Tuthill, M.D. Rush Medical College, Chicago, 1885, died from heart disease at his home in Chicago, April 18, aged 43.

John W. De Vaughan, M.D. Vanderbilt University, Nashville, Tenn., 1883, died at his home in Milltown, Ala., April 19, from paralysis.

John C. Willy, M.D. University of Zurich, Switzerland, 1874, died suddenly from apoplexy at his home in New Orleans, April 18.

Henry A. Mix, M.D. Rush Medical College, Chicago, 1864, a surgeon during the Civil War, died at his home in Oregon, Ill., April 22.

Franklin A. Sherman, M.D. Castleton (Vt.) Medical College, 1850, died at his home in Ballston, N. Y., April 22, aged 74.

Charles H. Link, M.D. Baltimore Medical College, 1898, died recently at his home in Burlington Flats, N. Y.

Charles L. Youmans, M.D. Atlanta (Ga.) Medical College, 1895, died at his home in Baxley, Ga., April 8.

Medical Organization.

Sumner County (Tenn.) Medical Society.

The physicians of Sumner County met at Gallatin, April 6, and perfected the organization of a county society, with Dr. L. Miller Woodson, Gallatin, president; Andrew J. Swaney, Gallatin, vice-president, and delegate to the Tennessee State Medical Society, and H. Reese, secretary and treasurer.

Buchanan County (Mo.) Medical Society.

At a meeting of physicians at St. Joseph, April 14, a new county society was organized on the lines suggested by the American Medical Association, with an initial membership of about fifty. Dr. Thomas H. Doyle was elected president; Dr. Thompson E. Potter, vice-president; Dr. J. M. Dunsmore, secretary, and Dr. Joseph J. Bansbach, treasurer, all of St. Joseph. Drs. James K. Graham, Chester A. Tygart and James W. Heddens were named as censors.

Grayson County (Ky.) Medical Society.

The physicians of Grayson County met at Lietchfield, April 14, and organized a county society after a talk from Dr. Charles Z. Aud, Cecilian, president of the Hardin County Medical Society. Dr. John M. Berry was elected president, and Dr. Andrew J. Slayton, vice-president, and Dr. George W. Armes, secretary, all of Leitchfield, and Dr. Henry C. Duvall, Millwood, was elected delegate to the state society. The constitution and by-laws of the American Medical Association was adopted in full.

Four States Reorganize in One Day.

Telegraphic reports from San Antonio, Texas; Lincoln, Neb., and New Orleans, La., announce that on April 29 each of these states adopted the constitution and by-laws recommended by the American Medical Association, with practically no changes. On the same date the Illinois State Medical Society also adopted the same constitution. This makes eight state societies that have adopted practically the same constitution within two weeks.

ASSOCIATION NEWS

NOTES ON NEW ORLEANS.

Final Announcements Concerning the Session Next Week.

The Bureau of Information of the New Orleans session, which will be located on the ground floor of the Artillery Hall, entrance on St. Charles street, announces the following:

Members of the committee will meet all incoming trains May 4 and 5. Placards will be in evidence in each station indicating where these gentlemen will be found.

The bureau will have every facility for supplying all kinds of information; this means male and female clerks, index lists of all visiting physicians and their ladies, railroad schedules, excursion information, telegraph, telephone, stenographer and typewriter, messenger services, guide books, newspapers, cigars, etc. The committee has completed all plans for the meeting and urge all members not located to inquire at the Bureau of Information for rooms.

Members of the profession are advised that badges will be furnished only to those who register as members of the American Medical Association. While the several Sections are open to the profession, the discussions are confined to members. Participation in the several entertainments is restricted as well to the members of the Association and to invited guests.

THE ENTERTAINMENT OF THE LADIES.

Members, with ladies, who have not already notified the committee are requested to leave word at the Bureau of Information as to the number and names of ladies in their party.

The Ladies' Committee announces a trolley ride for the visiting ladies, to start at 11 o'clock on Wednesday, May 6. All to report at 10:30 at the Palm Garden of the St. Charles Hotel.

On Thursday, May 7, at 9:30 at the Palm Garden, a ladies' committee will meet and escort visiting ladies who desire to see the old French quarter of New Orleans. Other features for the ladies have been announced previously.

TRIP TO LEPERS' HOME.

The Board of Control of the Leper Home has invited all members of the Association who may desire to visit this institution. The trip is arranged for Saturday, May 9, and it will take the entire day to make the trip. All desiring to go will leave word at the Bureau of Information. The expense will be nominal, but the exact cost will be furnished on application at the bureau.

OTHER ANNOUNCEMENTS.

The Howard Library, at Lee Circle, through Mr. William Beer, the librarian, invites members of the Association to see some of the special works on medical and hygienic subjects.

The Elks have extended the privileges of their club house to members of the Association who wear their badges.

The river excursion will be on the steamer *New South*, which will accommodate 2,200 people.

The Hotel Committee has received application for rooms for about 2,000 people thus far and 40 or 50 applications are being received daily.

Lunch will be served at reasonable rates in the Washington Artillery Hall by the Christian Women's Exchange.

BANQUETS.

Among the banquet announcements are the following: Section on Nervous and Mental Diseases, at Victor's Restaurant; Sections on Practice of Medicine, Pathology and Physiology, and Materia Medica, Pharmacy and Therapeutics, at West End Hotel; Section on Surgery and Anatomy, a smoker at Young Men's Gymnastic Club; Sections on Cutaneous Medicine and Surgery, and Hygiene and Sanitary Science, a smoker, place to be announced in Section meetings Tuesday afternoon; Section on Laryngology, at Antoine's Restaurant; Section on Ophthalmology, Tulane University Hall, Mr. Emile Lubeigt, chef; Section on Obstetrics and Diseases of Women, same place and menu as Ophthalmology. All these banquets and smokers will be held Tuesday evening.

Notice to Members of the House of Delegates.

The members of the House of Delegates are requested to meet in New Orleans Monday, May 4, at 2 p. m. This meeting will be informal, and no official business can be transacted.

Its purpose is to consider unofficially the business which must be transacted by the House of Delegates and to consider the result of the work of the several committees.

It is believed that this informal meeting on Monday will so fully acquaint the delegates of the work to be done that one meeting each morning will be sufficient to accomplish all the business of the Association. Thus the delegates will be free to attend the afternoon scientific work of the Sections.

Frank Billings, President.

Registration of Members of the House of Delegates.

The Committee on Credentials will be in session Monday morning at the St. Charles Hotel to receive credentials and register all delegates who will present themselves. It is hoped that as many as possible will register during the morning so that there may be no delay when the meeting is called to order at 2 o'clock.

OUR NEW HOME.

THE NEW BUILDING OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association now has a home of its own, and it is paid for. This achievement, the consummation of long-cherished plans, is one of which every member and subscriber may well be proud. The American Medical Association not only owns its own building, but it is thoroughly equipped for printing and publishing The Journal.

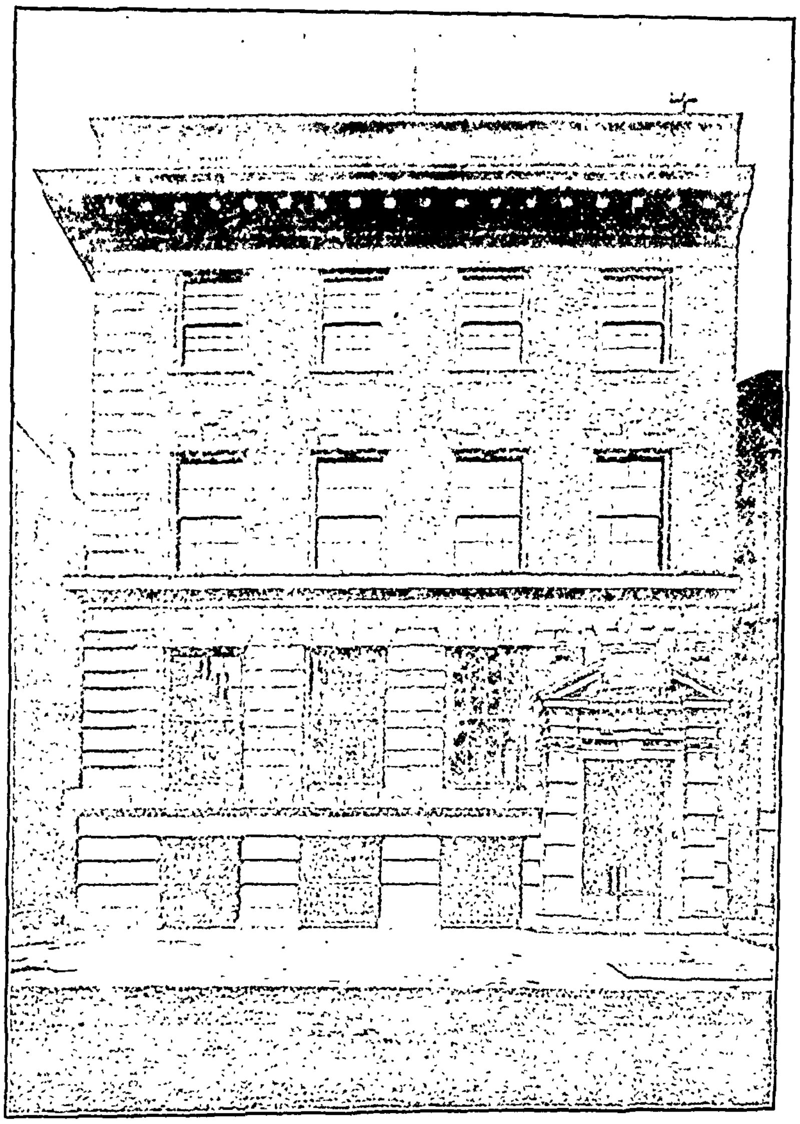
Believing that it will interest our readers to gain a general idea of the building and of the equipment by which The Journal is prepared each week, we give some illustrations showing the interior as well as exterior. The new building is near the corner of Dearborn Avenue and Indiana Street. It is on the north side, a few blocks from the business center of Chicago and not far from the lake. It is 40x80, of three stories with a high basement and is built of brick. The basement is used as a press room, the first floor as folding and mailing departments, the second floor as the editorial and business offices and the third floor as a composing room. The trustees' room and library is also on this floor. The building is strongly built so that it will allow additional stories. The land owned by the Association adjoining the building, on which are three residences, and which is 60x80 feet in size, will admit of addition as soon as the Association requires more room than is at present afforded.

It may not be out of place here to extend an invitation to members, subscribers, advertisers and other friends of the Association to inspect the building and equipment. Many have done so, taking a personal interest in the property. The members realize that they are the actual owners of the building and they have many words of congratulation for the progress that has been made.

One of the illustrations is a chart showing the growth of the circulation of The Journal. It is worthy of study. The following is a statement of the average weekly circulation from the first year to date:

1883	3,800
1884	4,020
1885	4,500
1886	4,800
1887	5,000
1888	5,100
1889	5,450
1890	5,450
1891	5,200
1892	5,200
1893	5,600
1894	6,200
1895	6,548
1896	7,742
1897	9,119
1898	11,270
1899	13,672
1900	17,446
1901	22,049
1902	25,321
1903 (first 4 months)	27,269

It will be remembered that from 1846 to 1882 the proceedings of the Association were published as an annual volume. A change was then made and a weekly journal established in order to give quicker and fuller reports to the members and to serve as a link to bind the members of the Association closer together by more frequent intercourse. The minutes of a meeting held in 1883, at which it was decided to commence publication of The Journal, makes interesting reading. A careful estimate was made to ascertain what support The Journal might receive. It was thought that a revenue from membership and subscriptions of $12,000 could be had; in 1902 the receipts from membership and subscriptions amounted to over $100,000. In 1883 the estimate was made that $5,000 might be received annually from advertising; in 1902 The Journal received about $70,000 from this source. In 1883 $8,000 was estimated to cover the cost of material, printing, wrapping and mailing The Journal; the white paper alone for 1902 cost $36,000.



THE NEW BUILDING OF THE AMERICAN MEDICAL ASSOCIATION.

THE PREVIOUS SESSIONS HELD AT NEW ORLEANS.

The session of the American Medical Association next week in New Orleans will make the third time the Association has met in the Crescent City. The first session was held there May 4-7, 1869, and the second April 28-May 1, 1885. It may not be uninteresting to look back at some things that took place at these sessions.

At the session held in 1869 the President was Dr. W. O. Baldwin of Alabama, and Dr. T. G. Richardson of New Orleans was the chairman of the Committee of Arrangements. The entertainments, according to the report of the meeting, consisted of a reception at the Mechanics' Institute on Tuesday evening, and an excursion down the Mississippi River, "to the plantation of Effingham Lawrence, Esq.," on Friday. One hundred and ninety-one registered at the meeting, beside twenty-seven "Members by invitation." Alabama was represented by 26; Arkansas, 2; Delaware, 1; District of Columbia, 7; Georgia, 3; Illinois, 13; Indiana, 3; Iowa, 1; Kentucky, 14; Louisiana, 21; Michigan, 5; Minnesota, 1; Mississippi, 20; Missouri, 3; New York, 14; Ohio, 13; Pennsylvania, 12; Rhode Island, 2; Tennessee, 13; Texas, 7; West Virginia, 3; Wisconsin, 2; Medical Dept. U. S. Army, 3; Medical Dept. U. S. Navy, 2.

MEDICAL EDUCATION.

As was not unusual at *that time, considerable* interest was shown in medical education, and the efforts at this session, as at many preceding, were for a higher standard. The President's address was mainly devoted to the subject, and it would make interesting reading at the present time. The following preamble and resolutions were introduced and referred to a committee, but the report does not state definitely whether or not the resolutions were adopted:

> Whereas, The medical teachers of America have, after a trial of twenty-two years, failed to meet satisfactorily and efficiently the requirements of the great body of the profession in regard to medical education; and
>
> Whereas, The condition of the profession is yearly becoming more deplorable, on account of the antagonistic and objectionable policy of medical schools, in making the amount of fees charged, rather than a successful teaching, the basis of competition; and

Whereas, To obtain professionally competent graduates, sound and efficient teachers are indispensably necessary; and

Whereas, Such teachers, to be found throughout the country, can not be induced to leave their homes without the assurance of competent remuneration; and

Whereas, Such remuneration can only be obtained by adequate fees charged, unless by a system of low fees the number of students be relied on to make up the inevitable pecuniary deficiency; and

Whereas, Reliance on numbers of students for this purpose deplorably crowds the already overcrowded professional field, diminishing thereby individual income, judgment, experience and skill, thereby compelling practitioners to resort to other avocations as a source of supplemental income, and

Whereas, This devotion to other pursuits often destroys opportunities for study and improvement, degrading thereby the status and standard of American physicians; and

Whereas, The schools of New England, New York, Pennsylvania, Maryland, Virginia, South Carolina, Alabama, Georgia, Texas, Tennessee and District of Columbia now charge comparatively remunerative fees, and

Whereas, The low system of fees is charged in only a few of the middle states, and can with advantage be made to conform to the rate of fees charged elsewhere; and

Whereas, It is as unethical for colleges to underbid each other pecuniarily as for practitioners to do so

DR. ISADORE DYER, NEW ORLEANS, CHAIRMAN OF THE COMMITTEE ON ARRANGEMENTS.

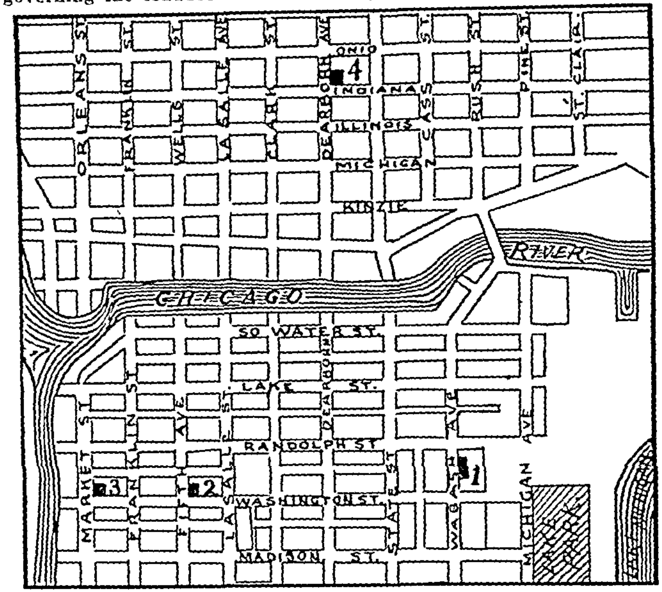
Resolved, That hereafter no medical school in this country, other than those fully endowed, shall be entitled to representation in this Association if the amount charged by such schools for a single course of regular lectures be less than $140.

Resolved, That all schools charging less than this sum are earnestly requested by this Association to advance their rate of fees to the amount mentioned.

Beside the above resolution, the President's Address and other matter referring to medical education was referred to a Committee on Medical Education. This committee made a report, part of which, we think, is worth copying:

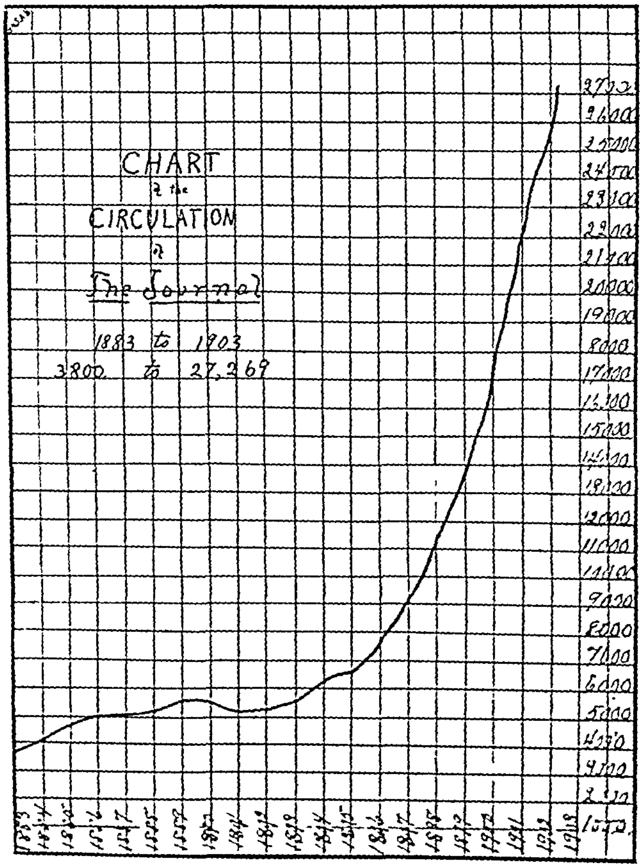
Whereas, The results of all the efforts made during the last twenty-five years to elevate the standard of medical education, through concert of action among the numerous medical colleges of this country, have proved, with equal clearness, that such concert of action in an efficient manner is unattainable; therefore,

Resolved, That whatever is done to establish and maintain a just and fair standard of medical education throughout our whole country must be done by the profession itself, through its own voluntary organizations, in the same manner that it now establishes and enforces its Code of Ethics. The profession is as competent to declare, through its representatives in the national, state and local societies, what shall be the standard of attainments for those to be recognized and admitted into its ranks, and to establish the boards or agencies by which compliance with such standard shall be ascertained, as it is to declare what shall be the ethical rules governing the conduct of those already admitted.



The first place at which the Association owned a part of its printing plant was at 68 Wabash Avenue (1). It was moved to 86 Fifth Avenue (2) in 1894, to 61 Market Street (3) in 1896, and to the present home of The Journal (4), 103 Dearborn Avenue, in 1903.

Resolved, That this Association earnestly requests each state medical society to appoint annually one or more boards of examiners, composed of five thoroughly qualified members, whose duty it shall be to meet at suitable times and places for the examination of all persons, whether graduates of colleges or not, who propose to enter on the practice of medicine in their respective states, except such as have been previously examined and licensed by a similar board in some other state.



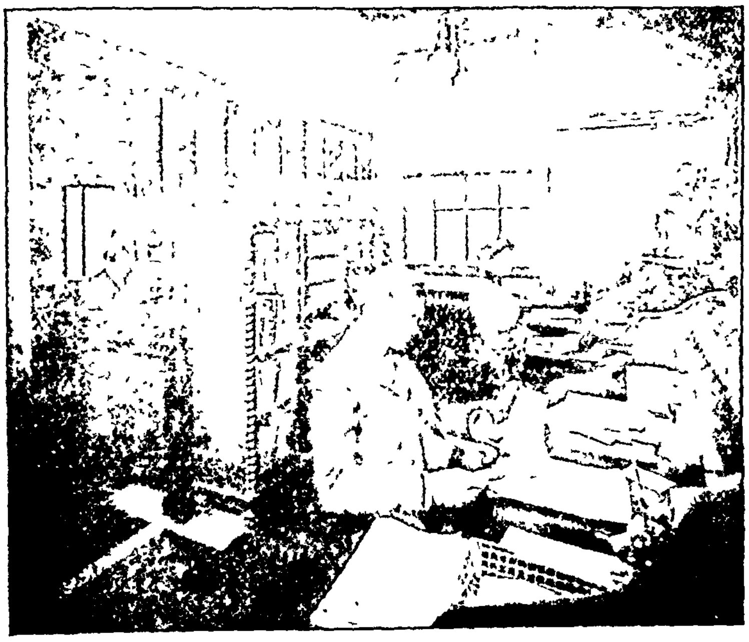
Resolved, That each state medical society be requested to make such regulations concerning the pay of the boards of examiners, and the fee to be charged for a license to practice, that the former shall in no case depend on the amount received from the latter.

Resolved, That each state medical society be requested to require its examining board or boards to exact of every applicant for examination adequate proof that he has a proper general education, is 21 years of age, and has pursued the study of medicine three full years, one year of which time shall have been in some regularly organized medical college, whose curriculum embraces adequate facilities for didactic, demonstrative and hospital clinical instruction.

Resolved, That each state *medical* society be requested to act on the foregoing propositions at the next regular annual meeting after the reception of copies of the same, and, if approved and adopted by the state medical societies of *two thirds* of the states, this Association shall deny representation from all organizations who longer refuse to comply with the same, and shall recommend the state societies to do the *same; and all persons* who, after that date, seek to enter on the practice of medicine without first receiving a license from some state board of examiners, shall be treated ethically as irregular practitioners.

Resolved, That, in adopting the foregoing resolutions, by which it is proposed to treat the medical college *diploma* the same as the diploma of any literary college, *this* Association is actuated by no desire to injure the medical schools of our *country.* On the contrary, by the adoption of the fourth resolution, at the same time that the value of the mere college diploma is practically nullified, it is the desire and confident expectation that those institutions will be greatly benefited, because they will be forced to rival each other in the extent and efficiency of their courses of instruction, instead of the number of diplomas which they can annually distribute.

AN EFFICIENT NATIONAL MEDICAL DIRECTORY.



PART OF THE EDITORIAL ROOMS.

Evidently at that time the need of a national directory of the medical profession was recognized, for Dr. J. H. Packard of Pennsylvania, who was chairman of the committee appointed the previous year to consider the subject, made his report, and the following resolution was adopted:

Resolved, That each state medical society be requested to prepare an annual register of all the regular practitioners of medicine in their respective states, giving the names of the colleges in which they may have graduated, and date of diploma or license.

It is too bad that this has not thus far been carried out. We sincerely hope it will be in the near future.

MEDICAL ORGANIZATION.

Considerable interest was shown in medical organization at that meeting, and it was at that time that an amendment to the By-Laws was adopted making membership in the American Medical Association depend on membership in a local society. The following was added to one of the paragraphs of the By-Laws:

Nor shall any person not a member and supporter of a local medical society, where such a one exists, be eligible to membership in the American Medical Association.

This clause has been in the Constitution and By-Laws ever since, although many think it is a new idea just promulgated in the reorganization work now going on.

THE SESSION OF 1885.

The session of 1885 was held under the presidency of Dr. Henry F. Campbell of Georgia. Dr. Samuel Logan of New Orleans was chairman of the Committee of Arrangements, and delivered the address of welcome.

Considerable interest was shown at this meeting in the meeting of the International Medical Congress, which was held in 1887.

As usual, the Association took some action in regard to elevating the standard of medicine in this country. The following resolutions in regard to the creation of state boards of examiners were adopted:

Resolved, That the Section on State Medicine earnestly advocates the establishment in every state *and* territory of state boards of medical examiners and licensers, whose *certificate* shall be the *only* license permitting practice of medicine in said states.

Resolved, That the Section requests the American Medical Association to direct its Permanent Secretary to transmit a copy of the annexed draft of a bill to the secretary of each and every state medical society, requesting that each state society discuss said bill, and report at the next meeting *of* this Association its views on the desirability of advocating such a bill.

THREE OF THE LINOTYPE MACHINES.

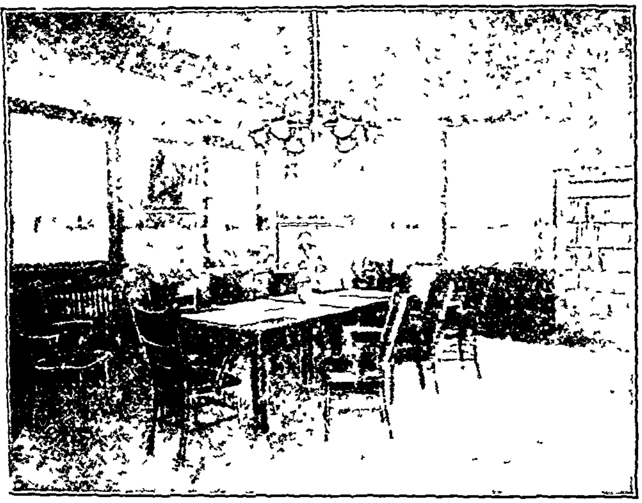
RUSH MONUMENT FUND.

Dr. A. L. Gihon, who, the preceding year, was appointed chairman of the Committee on the Rush Monument Fund, brought in the first report, which is a long one. It is in the form of an argument for the erection of a monument to Benjamin Rush, followed by a consideration of the character of the monument and the probable cost, the latter being estimated at $40,000. The question was asked in the report, "Can the 90,000 physicians in the United States raise $40,000 for such a purpose?" And it was answered: "If every member of the profession were to contribute only 50 cents the question would be solved, but as such unanimity is hardly to be expected, your committee has preferred to estimate that an equal number may decline to assent to their proposition, in which event, from a subscription rate of only $1 apiece, the sum of $45,000 will still accrue and be ample to erect a monument comparable in every respect to the splendid equestrian statues of General Thomas and General Scott or the seated figure of Chief Justice Marshall." The committee closed its report by recommending the adoption of certain resolutions which it had prepared. These, in brief, were that the Association undertake to erect a statue to Dr. Benjamin Rush in the City of Washington; that the necessary funds for this purpose be obtained by subscriptions limited to $1 from each physician and student of medicine in the United States, and by the voluntary donations of such additional sums as may be tendered by persons interested in the work; that a standing committee, to be styled the Rush Monument Committee, be appointed by the President, and the last resolution was:

> *Resolved* That an effort be made to determine a site for the monument, so that the ceremonies of its dedication may be made coincident with the meeting of the International Medical Congress at Washington in 1887

The year 1903 has come and the Rush monument is not yet erected. Each year since that time, until the year preceding his death, Dr. Gihon presented his report and his plea for this monument, as many of our readers know.

The total membership at this time was given as 3,050.



THE TRUSTEES' ROOM.

As intimated in the report of the Board of Trustees, this large increase in two years came about through the establishment of THE JOURNAL.

The officers of the seven Sections of the Association were as follows:

Section on Practice of Medicine, Materia Medica and Physiology: Chairman, J. T. Whittaker, Cincinnati; Secretary, B. L. Coleman, Lexington, Ky.

Section on Obstetrics and Diseases of Women: Chairman, S. C. Gordon, Portland, Me.; Secretary, —— Paine, Texas.

Section on Surgery and Anatomy: Chairman, Nicholas Senn, Milwaukee, Wis.; Secretary, H. H. Mudd, St. Louis.

Section on State Medicine: Chairman, John H. Rauch, Springfield, Ill.; Secretary, F. E. Daniel, Austin, Texas.

Section on Ophthalmology, Otology and Laryngology: Chairman, Eugene Smith, Detroit; Secretary, J. F. Fulton, St. Paul, Minn.

Section on Diseases of Children: Chairman, W. D. Haggard, Nashville, Tenn.; Secretary, W B. Lawrence, Batesville, Ark.

Section on Oral and Dental Surgery: Chairman, John S. Marshall, Chicago; Secretary, A. E. Baldwin, Chicago.

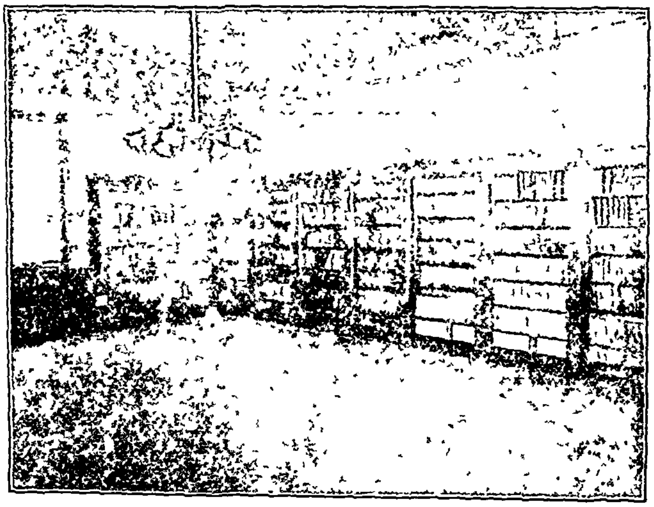
Dr. William Brodie, Detroit, was elected President for the ensuing year.

HOUSE OF DELEGATES.

The House of Delegates will be made up of the following delegates so far as we are advised. Those states not named have not appointed their delegates or have not sent in the names. Several states will be entitled to a larger representation than last year.

Delegates from the State Societies.

Arkansas—J. A. Dibrell, Little Rock.
California—H. Bert Ellis, Los Angeles.
Colorado—C. K. Fleming, Denver
Connecticut—C. S. Rodman, Waterbury; C. E. Brayton, Stonington.
Delaware—George W. Marshall, Milford.
District of Columbia—George M. Kober.
Florida—R. D. Murray, Key West.
Georgia—Jas. B. Morgan, Augusta; Floyd W. McRae, Atlanta.
Indian Territory—B. F. Fortner, Vinita.
Indiana—G. W. Kemper, Muncie; Ewin Walker, Evansville; W. N. Wishard, Indianapolis; D. C Peyton, Jeffersonville.
Iowa—J. R. Guthrie, Dubuque; Samuel Bailey, Mt. Ayr.
Kansas—J. E. Minney, Topeka.
Kentucky—J. N. McCormack, Bowling Green; Ap Morgan Vance, Louisville; I A. Shirley, Winchester.
Louisiana—Rudolph Matas, New Orleans.
Massachusetts—W. N. Swift, New Bedford; A. G. Minshall, Northampton; B. H. Hartwell, Ayer; W. T. Councilman, Boston; J. C. Warren, Boston; H. E. Marion, Brighton.



A CORNER OF THE LIBRARY.

Michigan—H. O. Walker, Detroit; V. C. Vaughan, Ann Arbor; T. A. Felch, Ann Arbor; J. B. Griswold, Grand Rapids.
Minnesota—A. W. Abbott, Minneapolis; Wm. Davis, St. Paul.
Mississippi—J. C. Hall, Anguilla.
Missouri—F. J. Lutz, St. Louis; Jabez N. Jackson, Kansas City; Wm. Dorsett, St. Louis.
Montana—T. J. Murray, Butte.
New Hampshire—Ira J. Prouty, Keene.
New Jersey—Chas. J. Kipp, Newark; Elias J. Marsh, Paterson; L. M. Halsey, Williamstown.
New York—E. Eliot Harris, New York; Charles A. Wall, Buffalo; Elias Lester, Seneca Falls; Jos. D. Bryant, New York.
North Carolina—E. C. Laird, Hot Springs; E. B. Glenn, Asheville.
Oklahoma—
Oregon—Andrew C. Smith, Portland.
Pennsylvania—William T. Bishop, Harrisburg; H. S. McConnel, New Brighton; John B. Roberts, Philadelphia; Wm. M. Welch, Philadelphia; Wm. S. Foster, Pittsburg; Geo. W. Guthrie, Wilkesbarre; G. C. Harman, Huntingdon; C. L. Stevens, Athens.
Rhode Island—John Champlin, Westerly; Frederick T. Rogers, Providence.
South Dakota—J. L. Stewart, Irene.
Tennessee—Daniel E. Nelson, Chattanooga; Louis LeRoy, Nashville.
Texas—H. A. West, Galveston.
Vermont—D. C. Hawley, Burlington.

Virginia—J. R. Gildersleeve, Tazewell; Stuart McGuire, Richmond; R. S. Martin, Stuart.

Washington—Park W. Willis, Seattle.

West Virginia—L. D. Wilson, Wheeling.

Wisconsin—W. T. Sarles, Sparta; H. Reineking, Sheboygan.

Wyoming—E. E. Levers, Spring Valley.

U. S. P. H. and M.-H. S.—Walter Wyman, Washington, D.C.

Delegates from the Sections.

Practice of Medicine—J. M. Anders, Philadelphia; C. G. Stockton, Buffalo.

Surgery and Anatomy—W. L. Rodman, Philadelphia; Robert F. Weir, New York.

Obstetrics and Diseases of Women—Edwin Ricketts, Cincinnati; E. E. Montgomery, Philadelphia.

Hygiene and Sanitary Science—N. S. Davis, Jr., Chicago; A. R. Reynolds, Chicago.

BUSINESS AND EDITORIAL OFFICES.

Ophthalmology—J. A. Lippincott, Pittsburg, Pa.; Frank Allport, Chicago.

Diseases of Children—A. C. Cotton, Chicago; S. W. Kelley, Cleveland, Ohio.

Stomatology—G. V. I. Brown, Milwaukee, Wis.; A. E. Baldwin, Chicago.

Nervous and Mental Diseases—H. N. Moyer, Chicago; Richard Dewey, Wauwatosa, Wis.

Cutaneous Medicine and Surgery—M. B. Hartzell, Philadelphia; W. L. Baum, Chicago.

Laryngology and Otology—Emil Mayer, New York; Norval H. Pearce, Chicago.

Materia Medica, Etc.—O. T. Osborne, New Haven, Conn.; W. B. Hill, Milwaukee, Wis.

Pathology and Physiology—E. R. LeCount, Chicago; J. T. Howard, Jr., Cleveland, Ohio.

SECTION OFFICERS.

We take pleasure in presenting this week half-tone reproductions of the photographs of the officers of the various sections. The success of the Association, as a scientific organization, depends on the manner in which these gentlemen perform their duties, and we believe that the work in the sections of the coming session will show that each of them has lived up to the example of his predecessor. They are deserving of the space allotted to them in this issue of The Journal.

Seven of the sections wisely re-elected their secretaries at Saratoga, namely: Pathology and Physiology, Joseph McFarland, Philadelphia; Obstetrics and Diseases of Women, C. L. Bonifield, Cincinnati, Ohio; Stomatology, Eugene S. Talbot, Chicago; Nervous and Mental Diseases, F. Savary Pearce, Philadelphia; Cutaneous Medicine and Surgery, R. R. Campbell, Chicago; Laryngology and Otology, J. F. Barnhill, Indianapolis, Ind.; Materia Medica, Pharmacy and Therapeutics, C. S. N. Hallberg, Chicago.

PROPOSED CODE OF ETHICS.

Offered at Saratoga Springs, 1902, and to Be Acted on at New Orleans.

At the last session of the American Medical Association the following action was taken:

Dr. E. Eliot Harris, New York, presented the following resolution:

> For more than a year some of the members of the Council of the New York State Medical Association have been engaged in a critical examination of the ethical part of the laws of the American Medical Association, resulting in the preparation of a revision of the

Code of Medical Ethics This revision has been approved by the Council of the New York State Medical Association, and the delegates have been instructed to present it to the House of Delegates at this session

Resolved, That the President appoint a committee of five to examine and report for final action at the annual session in 1903 the proposed revised Code of Medical Ethics which is herewith submitted in writing,

Resolved, That the proposed revised Code of Medical Ethics be published in the Association's JOURNAL three times before the meeting in 1903

On motion of Dr. C A L Reed, Cincinnati, the resolution was adopted

The following constitute the committee: Dr E Eliot Harris, New York, chairman; Dr William H Welch, Baltimore; Dr. T. J. Happel, Tennessee; Dr. Nicholas Senn, Chicago, and Dr. Joseph D Bryant, New York.

fidential intercourse to which physicians are admitted, in their professional visits, should be guarded with the most scrupulous fidelity and honor

SEC 3—The obligation of secrecy extends beyond the period of professional services, none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance should ever be divulged by physicians, except when imperatively required to do so by the laws of the state The force of the obligation of secrecy is so great that physicians have been protected in its observance by courts of justice

SEC 4—Frequent visits to the sick are generally requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, and to meet promptly every change which may occur. But unnecessary visits are to be avoided, as they give undue anxiety to the patient

SEC 5—Ordinarily, the physician should not be forward to make gloomy prognostications, but should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really exists, and even to the patient, if absolutely necessary This notice, however, is often so peculiarly alarming when given by the physician, that its deliverance ought to be declined whenever it can be assigned to any other person of good judgment.

COMPOSING ROOM

CHAPTER I—OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS

ARTICLE I—DUTIES OF PHYSICIANS TO THEIR PATIENTS

SECTION 1—Physicians should not only be ever ready to obey the calls of the sick, but should be mindful of the high character of their mission and of the responsibility they must incur in the discharge of momentous duties In their ministrations they should never forget that the ease, the health, and the lives of those entrusted to their care depend on skill, attention, and fidelity In their deportment they should unite tenderness, cheerfulness and firmness, and thus inspire all sufferers with gratitude, respect and confidence These observances are the more sacred because, generally, the only tribunal to adjudge penalties for carelessness or neglect is their own conscience.

SEC 2—Every case committed to the charge of a physician should be treated with attention and humanity, and reasonable indulgence should be granted to the caprices of the sick. Secrecy and delicacy should be strictly observed, and the familiar and con

SEC 6—The physician should be the minister of hope and comfort to the sick, since life may be lengthened or shortened not only by the acts but by the words or manner of the physician whose solemn duty is to avoid all utterances and actions having a tendency to discourage and depress the patient.

SEC 7—The medical attendant ought not to abandon a patient because deemed incurable; for, continued attention may be highly useful to the sufferer, and comforting to the relatives, even in the last period of the fatal malady, by alleviating pain and by soothing mental anguish

SEC 8—The opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of vicious conduct ought never to be neglected. Good counsels, or even remonstrances, will give satisfaction, not offense, if they be [illegible] proffered [illegible] a gent[illegible] of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.—OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

SECTION 1.—The members of the medical profession, on whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, are surely entitled to the highest private and public recognition.

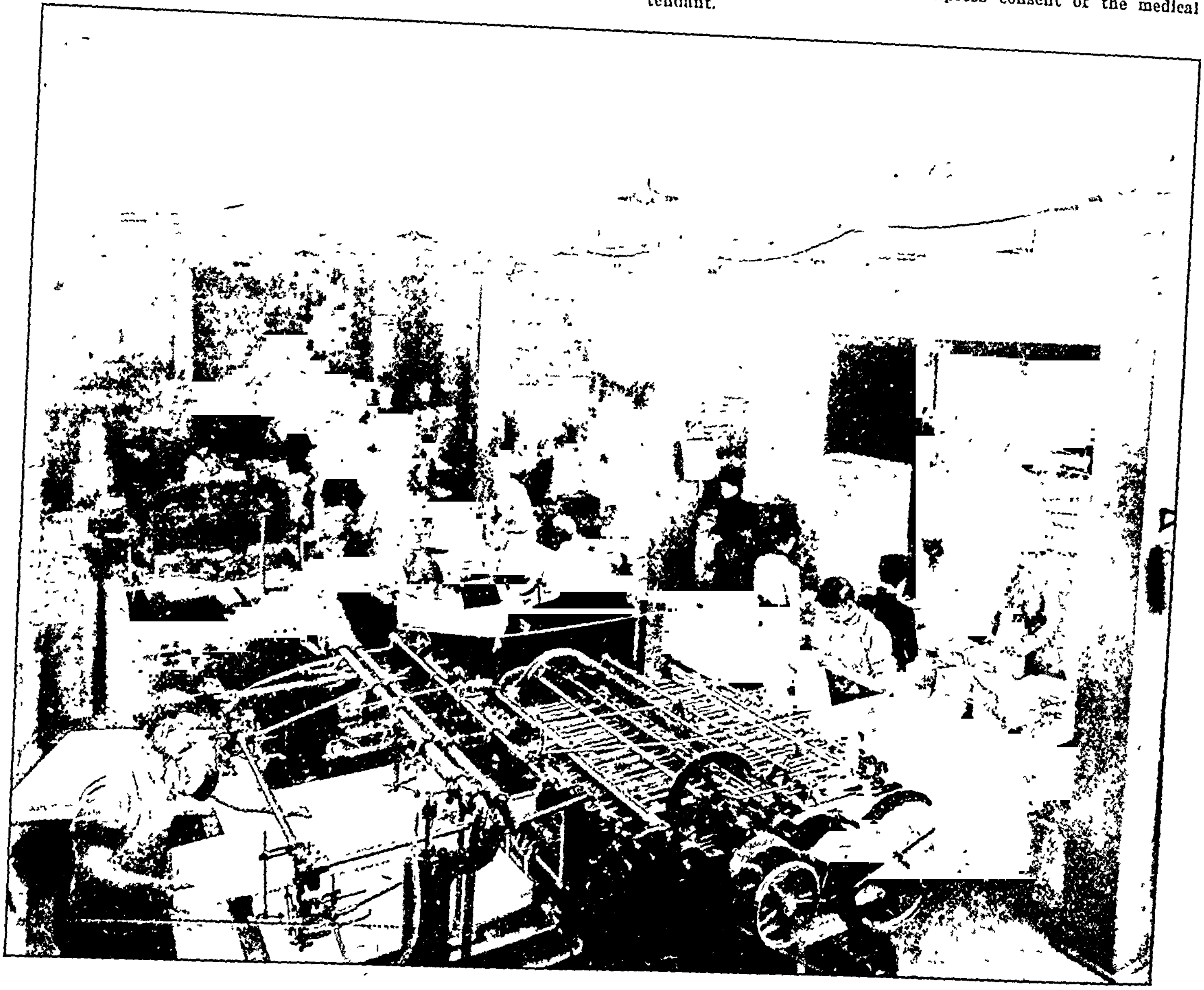
SEC. 2.—The first duty of a patient is to select as medical adviser one who has received a sound general and special education, whose habits are good, and who is not devoted to any pursuit incompatible with professional obligations.

SEC. 3.—The sick should always apply for advice in what may appear to be a trivial case, for the slightest accident may result gravely. It is also important that the patient seek assistance in the forming stage of a violent disease and communicate unreservedly to the physician its supposed cause.

SEC. 8.—Patients should never allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors who are so frequently met with and who pretend to possess infallible remedies for every disease. Howsoever simple some of their prescriptions may appear to be, it often happens that, besides being in themselves injurious, they are productive of much mischief by contravening the plan of treatment adopted by the physician in attendance.

SEC. 9.—Whenever possible, the patient should avoid even friendly visits of a physician who is not the regular attendant. But when such visits are received, there should be no conversation on the subject of the patient's disease, as a word may be spoken, without any intention of interference, which may destroy confidence in the course pursued and induce the patient to neglect the prescribed directions.

SEC. 10.—The patient or relatives should never send for a consulting physician without the express consent of the medical attendant.



BINDERY AND MAILING ROOM.

SEC. 4.—The patient should be on friendly terms with the medical adviser and bear in mind that physicians are under the strongest obligations of secrecy.

SEC. 5.—Women should never allow feelings of delicacy to prevent their disclosing the seat of their peculiar complaints. Howsoever commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with serious consequences, and a patient may sink under a painful disease which might have been prevented had timely intimation been given to the physician.

SEC. 6.—The obedience of a patient to the directions of the physician should be prompt and implicit. Failure in one particular may render an otherwise judicious treatment dangerous and even fatal. This remark is equally applicable to the unauthorized renewal of prescriptions, and to diet, drink, raiment and exercise.

SEC. 7.—As patients become convalescent they are apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse of the disease.

SEC. 11.—Patients should, whenever practicable, send for their physicians in the morning, before the usual hour for going out, and this gives them the opportunity to so apportion their time as to prevent interference of engagements.

SEC. 12.—Except in emergencies patients should avoid calling on their medical advisers during the hours devoted to meals or sleep.

SEC. 13.—The sick should be always in readiness to receive the visits of the physician, as detention, even for a very short time, is often of serious import to some other sufferer.

CHAPTER II.—OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

SECTION 1.—Every individual on entering the profession, and thereby becoming entitled to all its privileges and immunities, incurs an obligation to maintain its dignity and honor, to exalt its standing and to extend the bounds of its usefulness.

Sec. 2.—The physician should observe strictly such laws as are instituted for the government of the members of the profession; should honor the fraternity as a body; and, by unwearied diligence, should resort to every honorable means of enriching the science, and, at the same time, entertain a due respect for those seniors who, by their labors, have contributed to its advancement.

Sec. 3.—There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to these, as without it their respect and confidence can not be commanded; and to the profession because no scientific attainments can compensate for the want of correct moral principles.

Sec. 4.—It is incumbent on physicians to be temperate in all things, for the practice of medicine requires the unremitting exercise of a clear and vigorous understanding; and in emergencies—for which no physician should be unprepared—a steady hand, an acute eye, and an unclouded mind are essential to the welfare, and even to the life, of a human being.

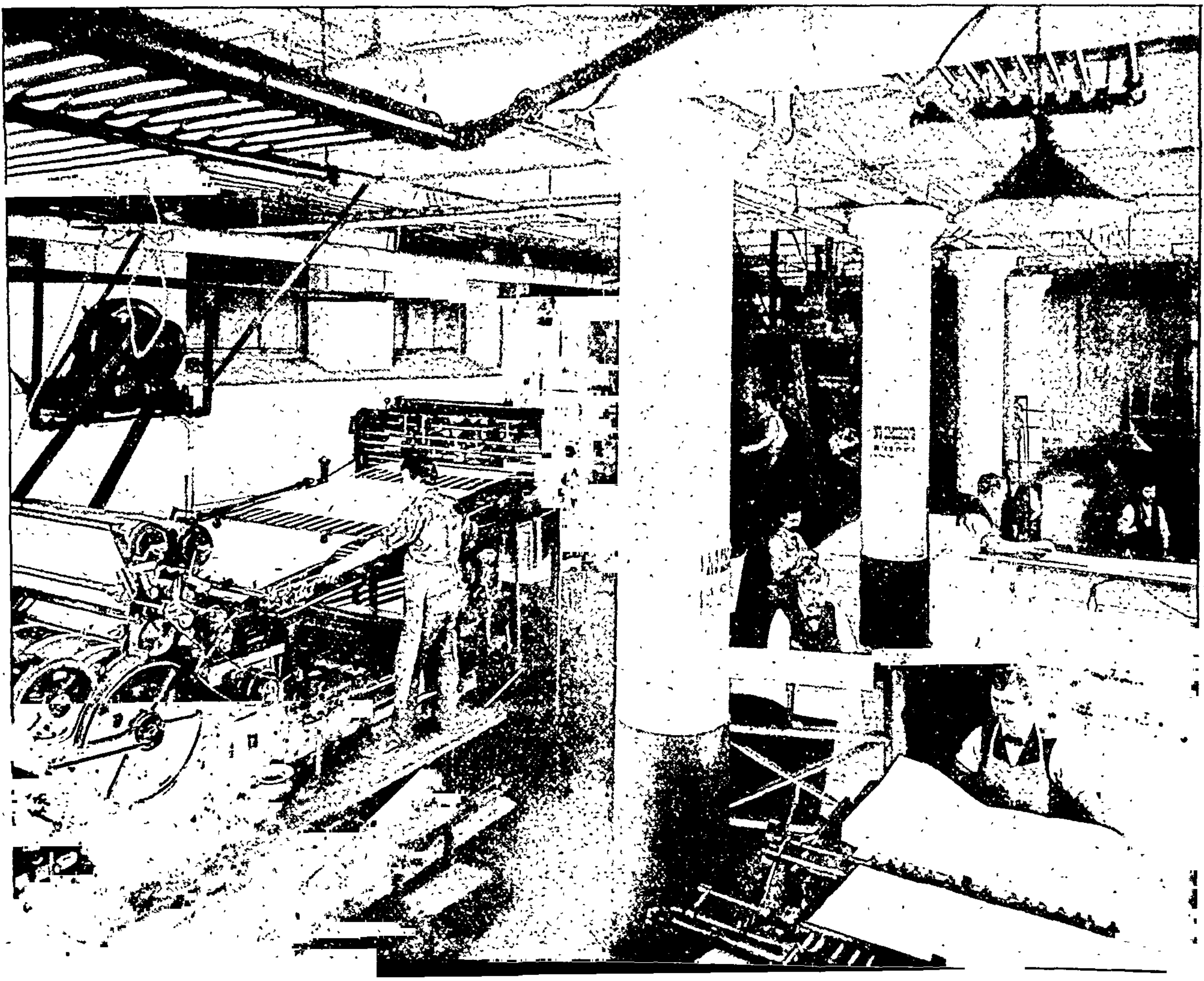
Sec. 5.—It is derogatory to the dignity of the profession to resort to public advertisements or private cards inviting the attention of persons affected with particular diseases, offering advice and medicine gratis and promising radical cures; or to publish cases and operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success; or to employ any of the other methods of charlatans.

Sec. 6.—Equally derogatory to professional character it is for a physician to hold a patent for any surgical instrument or medicine; or to dispense, or promote the use of, a secret medicine, whether it be composed by this physician or the exclusive property of others, for if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality, and if mystery alone give it public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or of any of the other substances that may be used medicinally.

ARTICLE II.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.

Section 1.—All practicing physicians and their immediate dependents are entitled to the gratuitous services of any one or more of the physicians residing near them.

Sec. 2.—Physicians afflicted with disease should not, as a general rule, undertake the treatment of their own sickness, nor of that of members of their family, for obvious reasons. In such circumstances they are peculiarly dependent on each other; therefore, kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such civility may give rise to embarrassment or interfere with that choice on which confidence depends.



PRESS ROOM.

Sec. 3.—When a physician is summoned, from a distance, to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to traveling expenses and to the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relatives.

ARTICLE III.—OF THE DUTIES OF PHYSICIANS AS RESPECTS VICARIOUS OFFICES.

Section 1.—The affairs of life, the pursuit of health and the various accidents and contingencies to which a physician is peculiarly exposed sometimes require the temporary withdrawal of this physician from daily professional labor and the appointment of a colleague to act for a specified time.

Sec. 2.—The colleague's compliance is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period half of the pecuniary obligations for such services should be awarded to the acting physician.

ARTICLE IV.—OF THE DUTIES OF PHYSICIANS IN REGARD TO CONSULTATIONS.

SECTION 1.—The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet emergencies occasioned by disease or accident.

SEC. 2.—The good of the patient being the sole object in view, any physician having a license to practice medicine conferred by a medical board authorized by the state may be aided in consultation.

SEC. 3.—No physician who indicates to the public that his practice is based on a sectarian system of medicine shall be entitled to professional fellowship or to recognition in medical bodies.

SEC. 4.—Consultations should be promoted in difficult cases, as they give rise to confidence and more enlarged views in practice.

Dr. W. S. Thayer, Baltimore, Chairman of the Section on Practice of Medicine.

SEC. 5.—The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, and this is generally practicable, for society has been so considerate as to allow the plea of a professional engagement to take precedence over all others and to be a good reason for the relinquishment of any present occupation.

SEC. 6.—As professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for a reasonable time, after which the consultation should be considered as postponed to a new appointment.

SEC. 7.—In consultations no rivalship or jealousy should be indulged; candor, probity and all due respect should be observed toward the physician in charge of the case.

SEC. 8.—The attending physician should be the first to question the sick, after which the consultant should have the opportunity to make such further inquiries as may be necessary.

SEC. 9.—After due examination of the patient, both physicians should retire to a private place for deliberation; and the one first in attendance should communicate the directions, agreed on, to the patient or friends, as well as any opinion which it may be thought proper to express.

SEC. 10.—No statement or discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending, and by their common consent; and no opinions or prognostications should be delivered which are not the result of previous deliberation and concurrence.

SEC. 11.—The opinion of the physician in attendance should be delivered first to the patient or friends; and when there are several consultants they should deliver their opinions in the order in which they have been called.

SEC. 12.—No decision should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But at the next consultation reasons for the variations should be stated. The same privilege, with its obligation, belongs to the consultant when sent for in an emergency during the absence of the family physician.

SEC. 13.—The attending physician, at any time, may prescribe for the patient; not so the consultant, when alone, except in a case of emergency or when called from a considerable distance. In case of emergency the consultant should do what is needed, and in the other case should do no more than make an examination of the patient and leave a written opinion, under seal, to be delivered to the attending physician.

SEC. 14.—In consultations theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded not on hypothesis, but on experience and observation.

SEC. 15.—All discussions in consultation should be held as confidential. Neither by words nor manner should any of the parties to a consultation assert or intimate that any part of the treatment pursued did not receive his assent.

SEC. 16.—Should an irreconcilable diversity of opinion occur when several physicians are called on in consultation, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician.

SEC. 17.—It may happen that two physicians can not agree in their views of the nature of a case and of the treatment to be pursued. In the event of such disagreement a third physician should, if practicable, be called in and, if circumstances prevent the adoption of this course, the patient or friends should make the selection. The physician so designated should take charge of the case and the other should then gracefully retire from any further deliberation in the consultation, or participation in the management of the case.

Dr. James B McElroy, Stovall, Miss., Secretary of the Section on Practice of Medicine

SEC. 18.—As circumstances sometimes arise to render a special consultation desirable, when the continued attendance of two physicians might be objectionable to the patient, the physician whose assistance is required in such cases should sedulously guard against all future, unsolicited attendance. Such consultations requiring an extraordinary portion of time and attention, at least a double fee should be expected.

SEC. 19.—A physician who is called in consultation should observe the most honorable and scrupulous regard for the character and standing of the attending physician, whose conduct of the case should be justified as far as can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in the attending physician.

ARTICLE V.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

SECTION 1.—Medicine being a liberal profession, those admitted to its ranks should found their expectations of practice entirely on the extent of their medical education.

SEC. 2.—The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder, nor should the course of conduct of this physician directly or indirectly tend to diminish the trust reposed in the attending physician.

Dr A. Palmer Dudley, New York, Chairman of the Section on Obstetrics and Diseases of Women.

SEC. 3.—The same circumspection should be observed when, from motives of business or friendship, a physician is prompted to visit a person who is under the direction of another physician. Indeed, such visits should be avoided, except under peculiar circumstances, and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4.—A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another physician in the same illness, except in case of a sudden emergency, or in consultation with the physician previously in attendance, or when that physician has relinquished the case or has been dismissed in due form.

SEC. 5.—Placed in the position stated in the preceding section, the physician should never throw out damaging insinuations on the practice previously adopted, and, indeed, should justify it if consistent with truth and probity; for it often happens that patients become dissatisfied when they are not immediately relieved, and, as many diseases are naturally protracted, the seeming want of success, in the first stage of treatment, affords no evidence of a lack of knowledge or skill.

SEC. 6.—When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired, this physician should resign the care of the patient immediately on the arrival of the family physician.

SEC. 7.—It often happens, in cases of sudden illness, or of accidents and injuries, owing to the alarm and anxiety of friends, that several physicians are simultaneously summoned. Under these circumstances, courtesy should assign the patient to the first who arrives and who, if necessary, may invoke the aid of some of those present. In such a case, however, the acting physician should cause the family physician to be called, and should withdraw unless requested to continue in attendance.

SEC. 8.—Whenever a physician is called to the patient of another physician during the enforced absence of that physician the case should be surrendered on the return of the absentee.

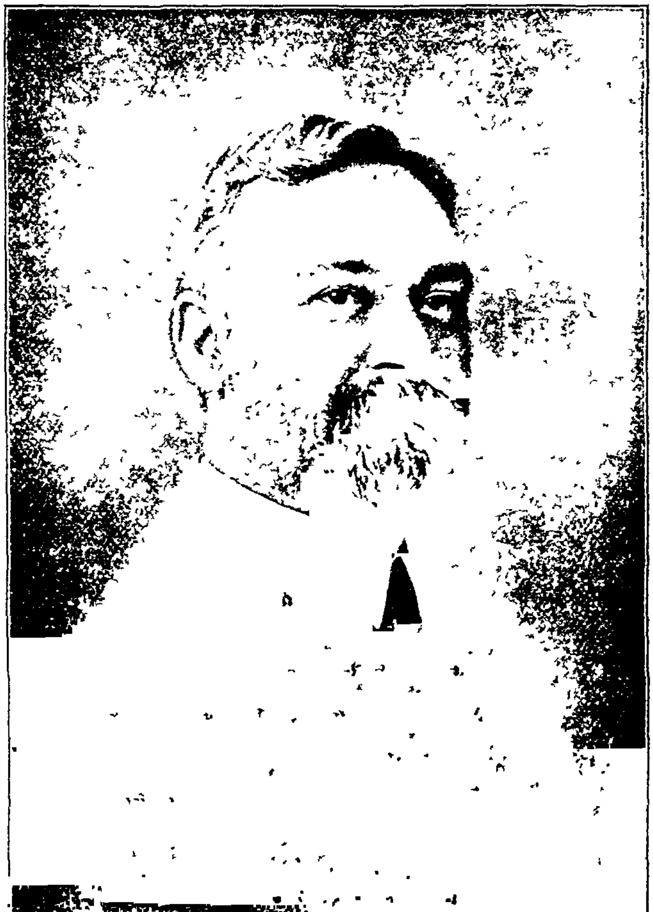
SEC. 9.—A physician, while visiting a sick person in the country, may be asked to see another physician's patient in consequence of a sudden aggravation of the disease. On such an occasion the immediate needs of the patient should be attended to and the case relinquished on the arrival of the attending physician.

SEC. 10.—When a physician who has been engaged to attend an obstetric case is absent and another is sent for, delivery being accomplished during the vicarious attendance, the acting physician is entitled to half the fee, but must resign the patient on the arrival of the physician first engaged.

ARTICLE VI.—OF DIFFERENCES BETWEEN PHYSICIANS.

SECTION 1.—Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur and can not be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a court-medical.

SEC. 2.—A peculiar reserve must be maintained by physicians toward the public in regard to some professional questions, and as there exist many points in medical ethics and etiquette through which the feelings of physicians may be painfully assailed in their intercourse, and which can not be understood or appreciated by general society, neither the subject-matter of their differences nor the adjudication of the arbitrators should be made public.



Dr. C. L. Bonifield, Cincinnati, Secretary of the Section on Obstetrics and Diseases of Women.

ARTICLE VII.—OF PECUNIARY ACKNOWLEDGMENT.

SECTION 1.—There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to their performance.

Sec. 2.—Poverty, mutual professional obligations, and certain of the public duties named in Sections 1 and 2 of Article 1, of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by the rich, or by societies for mutual benefit, for life insurance, or for analogous purposes, or any profession or occupation, can be admitted to possess such privilege.

Sec. 3.—It can not be justly expected of physicians to furnish certificates of inability to serve on juries, or to perform militia duty; or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to persons in indigent circumstances such services should always be cheerfully and freely accorded.

Dr. James E. Moore, Minneapolis, Chairman of Section on Surgery and Anatomy.

Sec. 4.—Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

Sec. 5.—It is derogatory to professional character for physicians to pay or to offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to demand or to receive such commissions.

Chapter III.—Of the Duties of the Profession to the Public and of the Obligations of the Public to the Profession.

Article I.—Duties of the Profession to the Public.

Section 1.—As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession, as on questions of sanitary police, public hygiene and legal medicine.

Sec. 2.—It is the province of physicians to enlighten the public in regard to quarantine regulations; to the location, arrangement, and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the sanitary police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering people, even at the risk of their own lives.

Sec. 3.—Physicians, when called on by legally constituted authorities, should always be ready to enlighten inquests and courts of justice on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poison or other violent means, and various other subjects embraced in the science of medical jurisprudence. It is but just, however, for them to expect due compensation for their services.

Sec. 4.—It is the duty of physicians, who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects, and to make known the injuries sustained by the unwary from the devices and pretensions of these artful impostors.

Sec. 5.—Physicians ought to use all the influence which they possess to discourage pharmacists from vending the secret or other medicines of charlatans, or from being in any way engaged in their manufacture.

Article II.—Obligations of the Public to Physicians.

Section 1.—The benefits accruing to the public, directly and indirectly, from the unwearied labors of the profession, are so numerous and important that physicians are entitled to the utmost consideration and respect from the community.

Sec. 2.—The public ought to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and charlatanism; and to afford every encouragement and facility for the acquisition of thorough medical education.

Book Notices.

A System of Clinical Medicine, Dealing with the Diagnosis, Prognosis and Treatment of Disease for Students and Practitioners.

Dr. John C. Munro, Boston, Secretary of the Section on Surgery and Anatomy

By Thomas D Savill, M D Lond, Physician to the West End Hospital for Diseases of the Nervous System. Volume I. Local Diseases and Microbic Disorders Cloth Pp. 702. Price, $4 38 net. London: J & A Churchill Philadelphia: P Blakiston's Son & Co 1903

This is a treatise on practice on a somewhat novel plan. The author has endeavored to bring in modern methods and in this work he follows up the inductive method of going from particulars to generalities, leading up through the symptoms to the diagnosis. Each chapter is divided into three parts, one treating of the symptoms which may indicate disease of the organism or region under discussion, the errors which may be made and the causes which give rise to them. The second part treats of the physical signs of disease in the region and the methods used to elicit them. The third and the largest portion begins with the clinical signs of the various maladies affecting that region and a summary of the routine procedure to be adopted, followed by sections dealing with several diseases arranged according to their clinical relationships; for example, quoting the author in his introduction, in chapter 3 on the heart, "part A describes and differentiates the various causes of breathlessness, palpitation, precordial pain and other symptoms which may be indicative of heart disease. Part B describes percussion, auscultation and other methods of examining the heart and part C deals seriatim first with acute and secondly with chronic disturbances classified and arranged on a clinical basis." With this explanation the general plan of the work can be readily appreciated. There are certain special features, however, which call for notice. One is the emphasis given to salient features of disease in italicized paragraphs at the head of each section treating of a separate malady. Another is a list of formulas at the close of the work as well as the description of other therapeutic methods, such as the general treatment of fever, etc., and the description of the exercises according to the Nauheim method for cardiac diseases. The book is not a complete treatise on the practice of medicine, dealing as it does only with the so-called local diseases and those diseases causing local symptoms and specific fevers of microbic origin. It is, however, complete in itself. There are one or two points in which the book is not up to date; the author, for example, states in his note on yellow fever that it is conveyed by fomites, ignoring the recent striking researches on the subject and the mosquito theory of the transmission altogether. On the whole, the book can not fail to prove a useful one.

Dr. H. M. Bracken, Minneapolis, Chairman of the Section on Hygiene and Sanitary Science.

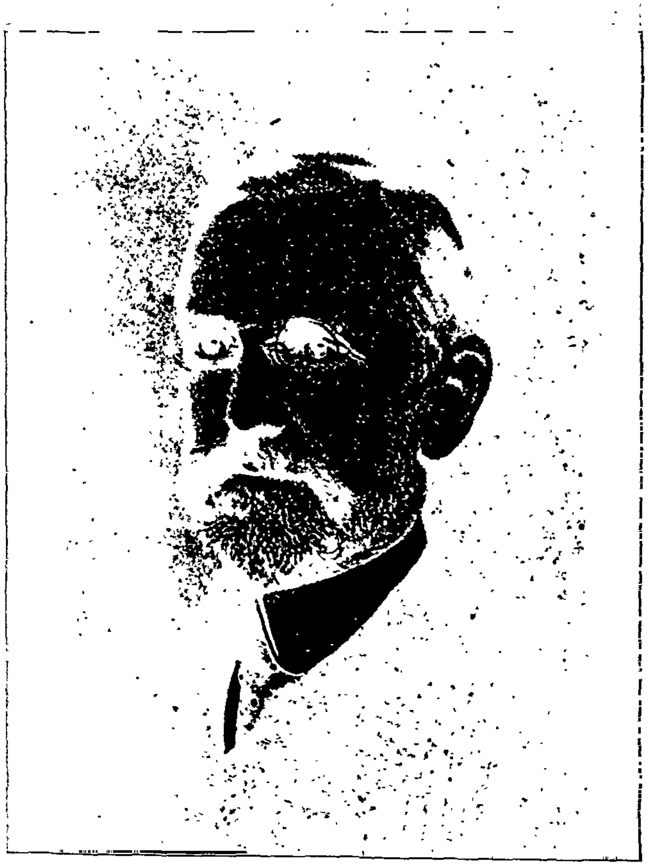
Clinical Surgery for the Instruction of Practitioners and Students of Surgery. By A. J. Ochsner, B.S., F.R.M.S., M.D., Chicago, Surgeon-in-Chief, Augustana Hospital and St. Mary's Hospital. Pp. 481. Price: Cloth, $6.00; Leather, $7.00. Chicago: Cleveland Press (The Clinical Review Publishing Co.).

The author says in the preface that he "lays no claims to the invention of a single new operation, nor has he produced a new or modified instrument, but has contented himself with applying to his surgical work what seemed best in the practice of the surgeons of the past and present."

The book simply reflects the methods of the author in his daily work, and no attempt is made to thoroughly cover any subject from a surgical point of view. Pathology is scarcely touched on, and much of the work consists in a detail of clinical cases and what was done for them. Some of the views held by the author will not be concurred in. For instance, there seems to be no good reason, when operating on a child for inguinal hernia, why the deeper layers should not be closed as well as when operating on an adult. His views in regard to the treatment of appendicitis have already been severely criticised by a number of surgeons.

The large plates are made a particular feature of the book. Some of them are very good, but Plates LVI and LVIII are libels on anatomy. The wide margin to the pages for marginal notes is of doubtful value, because one does not buy a book of this kind in which to write one's opinions, but to learn the opinions of the author.

The work must be looked on more as a detail of clinical cases than as a real contribution to surgery.



Dr. Gardner T. Swarts, Providence, R. I., Secretary of the Section on Hygiene and Sanitary Science.

Diseases of the Skin: Their Description, Pathology, Diagnosis and Treatment, with Special Reference to the Skin Eruptions of Children, and an Analysis of 15,000 Cases of Skin Disease. By H. Radcliffe-Crocker, M.D. (Lond.), F.R.C.P., Physician for Diseases of the Skin in University College Hospital. Third Edition, Revised and Enlarged. With Four Plates and 112 Illustrations. Cloth. Pp. 1466. Price, $5.00. Philadelphia: P. Blakiston's Son & Co. 1903.

Crocker's work on diseases of the skin has been a standard English treatise since the first edition appeared, and the appearance of a third edition is, therefore, only what might be expected. The present volume is greatly expanded and covers the subject much more thoroughly than the previous edition; in fact, it is one of the fullest treatises on skin disorders in our language. The illustrations, while not extensive, are useful. There are few, if any, skin diseases that are not described in this work. It seems to us, though, to be occasionally weak in regard to treatment and not entirely up to date. For example, it does not give the results of the latest experience with the *x*-ray management of certain skin diseases. The book will doubtless long hold its own among the many other excellent treatises on diseases of the skin.

Dr. John E. Weeks, New York, Chairman of the Section on Ophthalmology.

DISEASES OF THE STOMACH. A Text-Book for Practitioners and Students. By Max Einhorn, M.D., Professor in Clinical Medicine at the New York Post-Graduate Medical School and Hospital. Third Revised Edition. Cloth. Pp. 531. Price, $3.50 net. New York: Wm. Wood. & Co. 1903.

This is a fully revised edition of the author's former treatise with a number of additions, making it considerably different from the first edition, the second having been mainly a reprint of the first. Those who possess and depend on either of the former editions will find it necessary to obtain this one, the advances in this special department of medicine requiring considerable change to bring the work up to our present knowledge.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

To Remove Odors.

Dr. Cheves Bevill of Winfield, Ark., on reading the reference to the use of carbolic acid as a deodorant, on page 1020 of THE JOURNAL, April 11, suggests the use of spirits of turpentine either full strength or with equal parts of glycerin. He says that he has never found anything to be compared to it for this purpose. He reported its use in the "St. Louis Weekly Medical Review" in 1888. Turpentine may also be used on tampons or on absorbent gauze in cleansing wounds. Both the offensive odor and the tendency to hemorrhage will be lessened.

Hyperchlorhydria.

The following combinations have been used with success in the treatment of pyrosis:

℞. Bismuthi subcarb.	ʒiv	15
Tinct. hyoscyami	ʒiv	15
Aquæ camphoræ q. s. ad.	℥iii	90

M. Sig.: Shake and take one teaspoonful an hour before each meal; or:

℞. Argenti nitratis	gr. iv	25
Ext. hyoscyami		
Pulv. camphoræ, āā	gr. vi	35

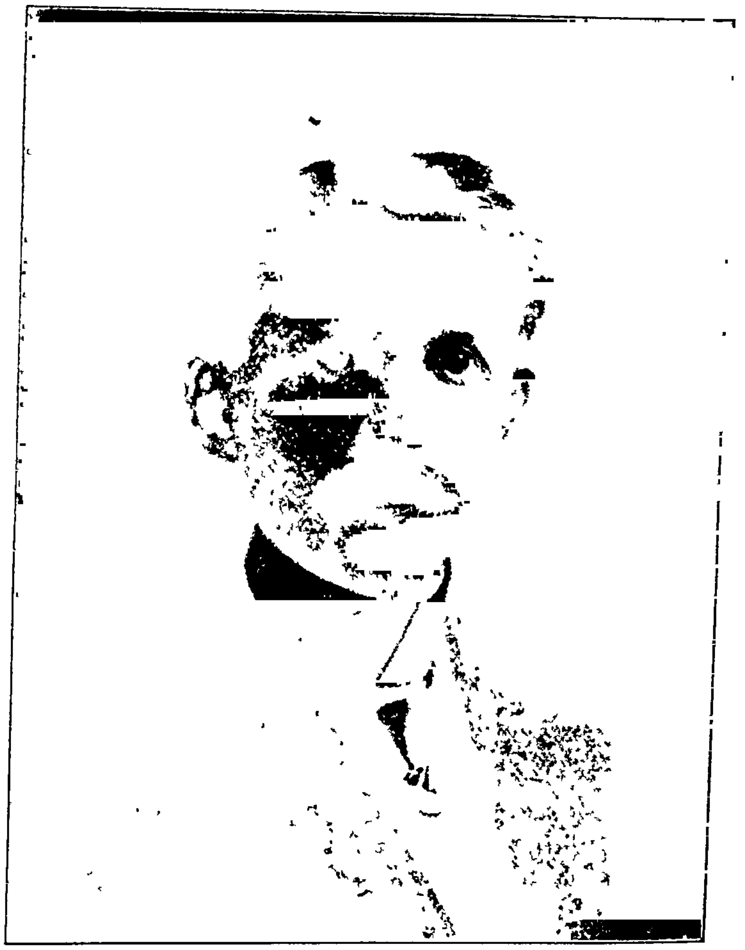
M. Ft. pilulæ No. xxiv. Sig: One pill to be taken one hour before each meal; or:

℞. Tinct. hyoscyami	ʒiv	15
Strontii bromidi	ʒiiss-v	10-20
Elix. simplicis q. s. ad	℥viii	240

M. Sig.: Two to four teaspoonfuls in a glass of water at meal time to relieve the distress.

Eczema.

The following combination is recommended by the "Indian Med. Gazette" in the treatment of eczema:



Dr. Frank C. Todd, Minneapolis, Secretary of the Section on Ophthalmology.

℞. Acidi borici	gr. xxx	2
Zinci oxidi		
Amyli tritici, āā	ʒvi	24
Liq. petrolati	℥xiii	52

M. Sig.: Apply twice daily with a glass rod Smear the salve thickly over the affected part and then cover it with a layer of cotton wool and apply a suitable bandage. The parts should be thoroughly cleansed every third or fourth day and a fresh application made. This may be repeated until all signs of inflammation have disappeared.

The following ointment is recommended by "Bul. Gen. de Ther." in the treatment of eczema:

℞. Naphthol camphoratæ	gr. viiss	50
Zinci oxidi	gr. lxxv	5
Liq. petrolati	ʒxii	48

M. Ft. unguentum. Sig.: Apply locally.

Sepsis Following Abortion.

Henry, in "Med. News," recommends the following outline of treatment of sepsis complicating abortion: Remove all debris from the uterus by means of the finger or sharp curette followed by flushing and thoroughly cleanse the raw surfaces, the cervix, vagina, and vulva. These raw surfaces should then be dried and a 95 per cent. solution of carbolic acid applied to them freely, washing away the surplus with sterile water. No tubes or packing should be left either in the uterus or vagina unless hemorrhage should require it.

Dr. John C. Cook, Chicago, Chairman of the Section on Diseases of Children.

According to the author a 2 per cent. carbolized vaginal douche should be used twice daily. The bowels should be kept free by the administration of one-half grain (.03) of calomel every hour for four hours, followed by the ordinary dose of salts.

Quinin should be given in three-grain doses (.20) every four hours, alternately with ferric chlorid given in fifteen minim doses (1.00) well diluted.

Nourishment consisting of milk, eggs and proper stimulants should be given every four hours.

Hemorrhoids.

According to an abstract in "N. Y. Med. Jour" hemorrhoids may be so treated medically as to cause no great discomfort, unless they become infected, if the rules of hygiene are properly observed. Sitz baths should be taken frequently. Moderate exercise only should be taken to diminish local congestion, over-indulgence in meat and spiced foods, while vegetables and fruits must be taken freely. The bowels must be regulated, a movement obtained, if possible, just before bedtime, as the hemorrhoids swell greatly after defecation and are reduced during the night. Instead of resorting to the use of drastic purgatives a teaspoonful of the following should be taken at bedtime:

℞. Calcined magnesiæ		
Potassii bitartratis		
Sacchari lactis, āā	℥ss	15

M. Sig.: One teaspoonful at bedtime.

Enemas are of value and may be taken cold. However, the author states that they are preferably taken hot when there is no pain, as the decongestive action of heat is more prolonged than that of cold. As an astringent, a teaspoonful of alum may be added to the enema.

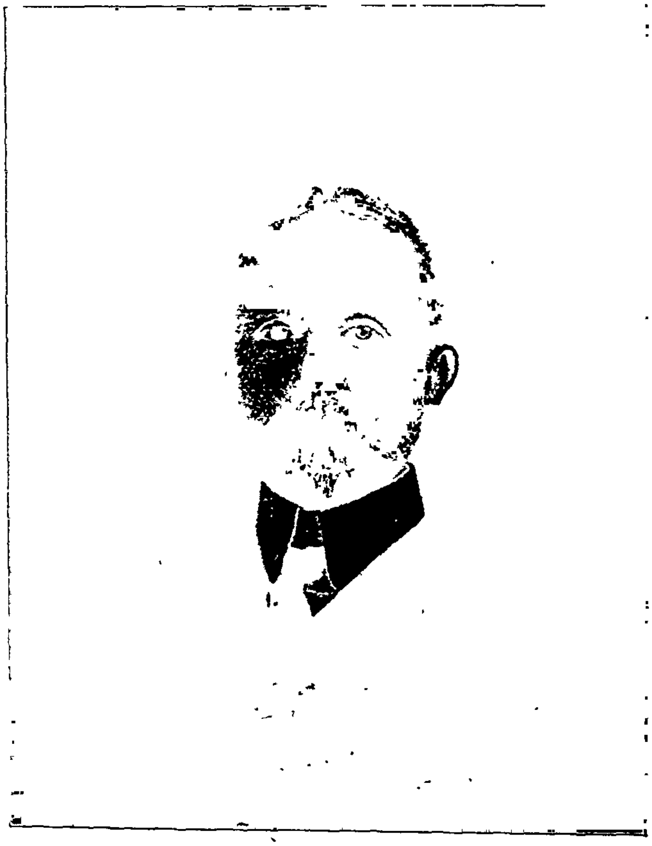
The following combination is sometimes recommended internally:

℞. Ext. hamamelidis	gr. 3/4	05
Ext. capsici aqueous	gr. iss	09

M. Ft. pil. No. i. Sig.: One such pill three or four times a day.

When the hemorrhoids protrude externally and are accompanied by pain, a pledget of cotton may be soaked in a 1 per cent. solution of cocain and applied locally; this will relieve the pain temporarily, but the inflammation must subside before permanent relief can be obtained. Applications of very hot or very cold water are recommended by the author or liquor plumbi subacetatis may be employed or spraying with hot boric acid solution. The anus must be kept clean and only absorbent cotton used in order to produce no irritation.

In cases of internal hemorrhoids coming down during defecation and returned with difficulty, the patient should be instructed to lie on his side with the lower thigh extended and the upper one flexed and with a compress soaked in water or olive oil they should be reduced with gentle taxis.



Dr. Thomas S Southworth, New York, Secretary of the Section on Diseases of Children.

The following combinations are recommended in the form of suppositories:

℞. Ext. krameriæ	gr. viiss	50
Cocainæ hydrochlor.	gr. 1/3	02
Ol. theobromæ	ʒi	4

M Ft. suppos. No. i. Sig.: One such to be used night and morning to relieve the pain.

Or the following, which is made up according to Unna's formula:

℞.	Chrysarobin	gr. v		30
	Iodoformi	gr. iss		09
	Ext. belladonnæ	gr. 3/4		05
	Olei theobromæ	ʒv	20	

M. Ft. suppos. No. v. Sig.: One to be inserted night and morning.

If hemorrhage should occur, cold applications may be applied or water containing 5 per cent of alum. Mathieu recommends a hot solution (118 F.) containing gr. 60 (4.00) of calcium chlorid tó the quart. If the foregoing proves unsuccessful the following suppository may be employed:

Dr. M. L. Rhein, New York, Chairman of the Section on Stomatology.

℞.	Antipyrini			
	Salol, āā	gr. iv		25
	Ext. belladonnæ	gr. 1/6		01
	Ol. theobromæ q. s.			

M. Ft. suppos. No. i. Sig.: To be inserted to check hemorrhage.

Internally the following is of service:

℞.	Calcii chloridi	gr. lx	4
	Syrupi simplicis	℥i	30
	Aquæ	℥iv	120

M. Sig.: One tablespoonful every hour.

Pertussis.

Fournier, in "Med. Bul.," recommends the following combination as an inhalation in the tréatment of whooping cough, which he states has been of great value to him in a recent epidemic:

℞.	Glycerini	ʒiiss	10
	Creosoti	m. lxxv	5
	Essentiæ terebinthinæ	ʒi	4
	Essentiæ eucalypti	m. xlv	3
	Essentiæ caryophylli	m. xv	1

M. Sig.: As an inhalation.

A mask similar to that employed in narcosis is used, and about ten drops of the mixture are poured on the center of the mask. Violent fits of coughing are noticed at first, when the mask should be removed until the child becomes accustomed to breathing the preparation.

Calomel in Children's Diseases.

The "Indian Med. Record," in commenting on the value of calomel in children's diseases, states that it may be given in three quarter grain doses (.05) for each year of age This dose may be given alone in the morning while fasting or mixed with equal quantity of scammony or jalap and may be administered in jam, honey, sweet mucilage, syrup or with sugar. It is slow in acting, requiring, perhaps, half a day. In the infective diseases of children the author recommends it in doses of grain 1/6 (.01) to grain 1/2 (.03) every two or three hours, according to age. In jaundice, congestion of the liver or cirrhosis it should be given in still smaller doses, gr. 1/6 (.01) to gr. 1/3 (.02) being given every morning for eight days. In the treatment of tapeworm it may be combined with the oil of male fern, and for ascarides it may be given in the following combination:

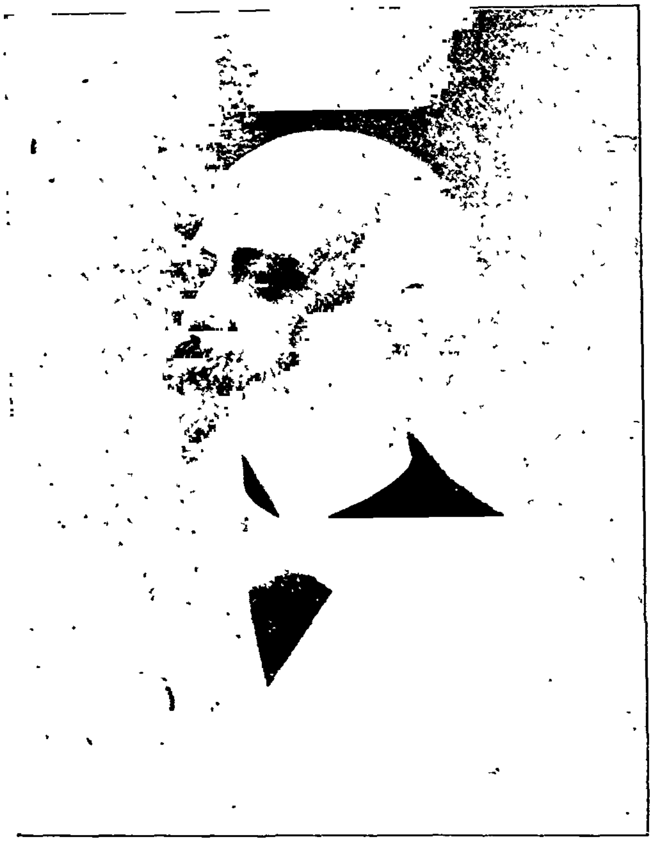
℞.	Santonin			
	Hydrarg. chloridi mitis, āā	gr. iii		20
	Sacchari	gr. lxx	4	65

M. Ft. chartulæ No ix. Sig.: Three to be given each morning, at intervals of one hour, for three days.

As a gastrointestinal disinfectant, in the treatment of flatulent colic of infants, it is recommended in still smaller doses ranging in size from grain 1/12 (.005) to gr. 1/3 (.02). It may be used in such doses as the foregoing in the treatment of vomiting, green stools and acute febrile gastritis or when the temperature rises in the course of subacute or chronic gastroenteritis, after the administration of which the temperature will usually drop. In the treatment of infantile cholera it is recommended that the stomach first be irrigated with warm water and as soon as the vomiting ceases the administration of calomel should be commenced, and continued every two hours

Dr. E. S. Talbot, Chicago, Secretary of the Section on Stomatology.

until ten or twelve powders have been taken, when it will usually show its good results. It is also recommended in the treatment of catarrhal jaundice of children. The following precautions are attached in the administration of calomel: When it is mixed with sugar it should be added at the time the powder is given to the infant; prolonged contact leads to some formation of corrosive sublimate. It should also be kept in the dark as exposure to sunlight decomposes it. Calomel is incompatible with chlorids, iodids and hydrocyanic acid; it should not, therefore, be given after a meal if salt has been used, nor with bitter almonds or cherry laurel water nor with the iodids.



Dr. F. W. Langdon, Cincinnati, Chairman of the Section on Nervous and Mental Diseases.

Medicolegal.

Taking Deposition of Busy Physician Not Authorized.—The Mississippi Code provides for the taking of depositions where on account of a witness being about to depart from the state, or because of his sickness, or other causes, he will likely be unable to attend trial But that one is a physician in large practice, "and that it is likely that the said witness will be unable to attend trial," etc., the Supreme Court of Mississippi holds, American Express Company vs. Bradford, does not bring the instance within the category meant by the words "or other causes" in the statute.

Physician May Write Prescription for Himself.—Article 405 of the Penal Code of Texas of 1901 provides, among other things, that if any physician shall give a prescription to be used in obtaining any intoxicating liquor in any county, justice precinct, city or town, in which the sale of intoxicating liquor has been prohibited under the laws of the state, to any one who is not actually sick, and without a personal examination of such person, he shall be punished, etc. The Court of Criminal Appeals of Texas holds, Hawk vs. State, that it was the intent of the legislature by this article to make it an offense to give a prescription to another party than the one writing the prescription, and that it is not unlawful for any one to write a prescription for himself.

By Whom Professional Attendance Must Be Proved.—In the case of Jennings vs. the Supreme Council of the Loyal Additional Benefit Association, brought to recover on a beneficiary certificate, the first appellate division of the Supreme Court of New York holds that the burden of showing that the testimony of a physician was privileged was on the party suing, who objected thereto. This was neither shown or attempted to be shown by the examination of the physician himself; and it did not appear from his examination, so far as the record disclosed, that he ever attended the insured professionally. And it will not do, the court thinks, to rule out the testimony of a physician on the ground that the evidence is privileged from the mere fact that some other witness has incidentally testified to professional treatment by the physician of the person concerning whose appearance or state of health the inquiry is made. Here, for aught that appeared, if the party suing had sought to show by the examination of the physician in question that his testimony was privileged, the physician might have denied that he ever treated the insured professionally. Furthermore, the court says, if it appeared that the physician had treated the insured professionally, the only privileged evidence would have been the information derived from such professional attendance. It was perfectly competent to show by him what he observed of the insured and knew of him on other occasions when not attending him professionally; for example, what he saw and learned of the insured's appearance and condition at times when he was attending other members of the family.

Dr. F. Savary Pearce, Philadelphia, Secretary of the Section on Nervous and Mental Diseases.

Mental Suffering as an Element of Damages.—The Supreme Court of Pennsylvania says, in Linn vs. Duquesne Borough, that mental suffering has not generally been recognized as an element of damages for which compensation can be allowed, unless it is directly connected with a physical injury, or is the direct and natural result of a wanton and intentional wrong. Where a claim is for mental suffering that grows out of, or is connected with, a physical injury, however slight, there is some basis for determining its genuineness, and the extent to which it affects the claimant. But as the basis of an independent action, mental suffering presents no features by which a court or jury can determine either its existence or its extent, and claims founded on it have generally been regarded as too uncertain and speculative for consideration. Excepting cases in some jurisdictions where recoveries have been had for the failure to deliver telegrams announcing illness or death, or other matters of personal concern, but not of pecuniary importance, the instances are very few in which an independent action has been sustained for mental suffering alone. The decided trend of decision both in this country and in England is against the maintenance of such an action, or the allowance for mental suffering as an element of damages when distinct from physical injury. The cases in which mental suffering has been considered as an element of damages are those in which the suffering was caused by the sense of peril at the time of the physical injury, or was incident to the physical pain, and formed a part of the actual injury. The objections to making mental suffering the sole ground of recovery apply with equal force to allowing it as an element of damages when it is not a part of the actual injury, but arises afterward from regret, disappointment, or anxiety. There are the same opportunities for establishing fanciful or fraudulent claims by testimony, which it is impossible to contradict or impeach, and the injustice of holding a party responsible for the unforeseen consequences of mere neglect is as great in one case as the other.

Dr. John A. Fordyce, New York, Chairman of the Section on Cutaneous Medicine and Surgery.

Sale of Practice with Agreement to Relinquish Office.—A physician sold a house and lots, his good will as a physician, and also agreed to relinquish to the purchaser his office for the practice of medicine and surgery. As the purchaser knew, he did not own the office in which he was situated, but, with another physician, as partners, had rented the office. The seller's partner expressed himself satisfied with the change, though subsequently proposed such terms for the use of the office, of which he had meanwhile obtained a lease, that the purchaser aforementioned declined to have more to do with the contract. Then the seller sued him for $500 damages for breach of contract, and recovered a judgment for $400. The Court of Appeals of Kentucky holds, Wallingford vs. Aitkins, that it could not, by any reasonable construction of the contract, be construed that the seller was to rent and pay the rent to the owner of the office for the purchaser. It also holds that when the purchaser announced by letter that he would not comply with his contract, this was a renunciation of the contract, and the seller then had the right to sue him for a breach of it. The jury were instructed that when the purchaser mailed to the seller the letter declaring that he declined to have anything more to do with the contract, the seller had nothing further to do in the premises; this was a renunciation of the contract on which the suit was founded; and the seller was entitled to such damages as the jury might believe from the evidence he had sustained by reason thereof, not exceeding the sum of $500, the amount claimed. The language of the contract that the seller agreed "to relinquish his office for the practice of medicine and surgery" to the purchaser, simply meant that he was to vacate the office and leave the same to the use of the purchaser, if he chose to occupy it, and if the jury believed from the evidence that the seller was able, ready and willing to so relinquish, then the law was for the seller, and the jury would so find. The measure of damages in this cause was the difference between the contract price of $3,500 to be paid the seller by the purchaser, under the contract, and the market value of the property at the time of the breach of the contract and when sold, not exceeding $500, the amount claimed. The court of appeals holds that these instructions were proper, and covered the law of the case.

Dr. R. R. Campbell, Chicago, Secretary of the Section on Cutaneous Medicine and Surgery

Frank Billings

President of the American Medical Association

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

April 18.

1 *The Therapeutic Value of the Roentgen Ray in the Treatment of Pseudo-Leukemia. N. Senn.
2 *A Plea for the Non-Hospital or Office Treatment of Diseases of the Rectum and Anus. Samuel G. Gant.
3 The Practical Uses of Hypnotic Suggestion. William L. Howard.

Dr. George L. Richards, Fall River, Mass., Chairman of the Section on Laryngology and Otology.

4 *The Work Performed by the Diagnosis Laboratory of the Department of Health in Connection with Ehrlich's Diazo Reaction During 1902. J. S. Billings, Jr.
5 *The Treatment of Some of the Surgical Complications of Typhoid Fever. John F. Erdmann.
6 *Is the Cognomen, "Chemical Physiology," Scientific? A Study of Vital Processes. Joseph Clements.
7 The Management of Occipitoposterior Positions of the Presenting Head. (Concluded.) Walter J. Cavanagh.

1. **X-Rays in Pseudoleukemia.**—Senn reports two cases in which, in view of the hopeless condition, he suggested the use of the rays, in addition to giving arsenic and iron. The benefit was great, both patients now considering themselves in perfect health. He says in his remarks that there is no doubt that the constitutional disturbances which follow the prolonged use of the *x*-ray, and which set in simultaneously with the progressive diminution in the size of the glands, were due to toxemia caused by absorption of the degenerative products of pseudoleukemia. This was also undoubtedly the cause of the increased enlargement of the spleen, which was noted after the second series of applications in the second case. The constitutional disturbances were decided and annoying itching, burning, pigmentation, etc. He says the success attained in these two cases by the use of the *x*-ray leaves no doubt as to the curative effect of the rays in the treatment of pseudoleukemia.

2. **Rectal and Anal Disease.**—The forms of trouble which Gant would treat in the office or away from the hospital are external and internal hemorrhoids, in the latter of which he uses injections as well as the ligature, polypi in the rectum, anorectal abscess, fistula, fissure of the anus, ulcer, pruritus, constipation and fecal impaction. Cancer and stricture can hardly be operated on in the office excepting when in the lower rectum, but in most cases the local treatment and topical applications, etc., can do much toward improving the condition.

4. **The Diazo Reaction.**—The conclusions derived from investigations by this method in the laboratory of the New York Department of Health are given by Billings as follows:

1. The examination of the urine in cases of suspected typhoid fever is of value, provided that its limitations are recognized.
2. While not so absolutely pathognomonic of typhoid fever, yet the diazo reaction is even more constantly present in that disease than the Widal reaction. So that its absence at a period when it should be present, if the case is one of typhoid fever, is of considerable value in making a negative diagnosis.
3. In a majority of instances the diazo reaction is present in the urine at least forty-eight hours earlier than the Widal reaction in the blood.
4. It disappears much earlier than the Widal reaction, however, and negative results obtained later than the second week are of little or no value.
5. "Doubtful reactions" have slight significance.

5. **Typhoid Fever Complications.**—The complications of typhoid discussed here by Erdmann are liver abscess, perforation of the gall bladder, cholecystitis and intestinal perforation. The operative treatment of each is discussed. For liver abscess, opening, either by rib excision or otherwise, is advised with subsequent drainage. He does not believe in delaying pus evacuations at the expense of the patient's vitality. In cases of perforation of the gall bladder there is only one treatment, he says, cholecystectomy, though the condition of the patient must weigh with us somewhat in the consideration, and cholecystotomy must be done in certain cases. Repair by suture is unwarranted. Operative interference in cholecystitis depends largely on the symptoms presenting. If marked rigidity of the upper rectus segment continues for thirty-six to forty-eight hours without any diminution, and septic conditions are indicated by the temperature and pulse, or rupture of the

Dr. J. F. Barnhill, Indianapolis, Secretary of the Section on Laryngology and Otology.

bladder threatens, then cholecystotomy should be performed if the patient's condition is bad or cholangitis is present; otherwise cholecystectomy. In all cases the abdomen may be closed without drainage unless we leave the cystic duct open for drainage of the hepatic fluid. The statistics of the operation for intestinal perforation are noted and the principal question seems to be whether we should wait six to twelve hours for subsidence of shock. He is inclined to answer this in the negative from his study of the statistics. The suture to be employed is either the Lembert or the circular purse-string when inversion is possible. The question of drainage can be settled only by experience. He believes that with a fairly clean toilet, no drainage should be used.

Dr. S. Solis Cohen, Philadelphia, Chairman of the Section on Materia Medica, Pharmacy and Therapeutics.

6. Vital Processes.—Clements' article is an argument in favor of the vitalistic point of view in physiology.

Medical Record, New York.

April 18.

8 *A Report of Final Results in Two Cases of Polyarthritis in Children of the Type First Described by Still, together with Remarks on Rheumatoid Arthritis. Royal Whitman.

9 *"Eye-strain" in Youth and Its Modern Treatment. Ambrose L. Ranney.

10 Tuberculous (Basilar) Cerebrospinal Meningitis and Delusional Insanity Complicating Pulmonary and Laryngeal Tuberculosis. Henry Levien.

11 *Resection of Intestine, with Report of Three Interesting Cases. A. E. Isaacs.

8. Polyarthritis of the Still Type in Children.—The two cases reported by Whitman are, as he says, undoubtedly samples of the disease described by Still in 1897, consisting in general chronic progressive enlargement of the joints, with general enlargement of the glands and spleen. The cases are elaborately reported, with illustrations and radiograph. One of them recovered, which is apparently decidedly different from the usual course of the disease. Recovery in this case was apparently completed by an attack of acute disease, scarlatina, after which the patient regained his former health. The author remarks in regard to the nature of rheumatoid arthritis, and seems to doubt the infectious nature of the disorder as well as other theories that have been advanced.

9. Eye-Strain in Youth.—Ranney discusses this disorder and insists on its importance. His conclusions are:

1. Eye strain can not be recognized too early in youth.

2. Its scientific investigation by modern methods and its radical correction may favorably modify both physical and mental development.

3. The neglect of an existing eye-strain may in time allow it to exhaust the reserve nerve capital of the sufferer and produce untold ills both of body and mind.

4. No child should ever be allowed to begin education until it is known that its eyes are properly fitted for the work.

5. Legislative enactment should, and surely will in time, compel an eye examination of every child before it enters the public schools.

6. Teachers should also be instructed in the rudimentary steps of vision testing.

7. Tests for mal-adjustment of eye-muscles should be made on every child as thoroughly and intelligently as tests for errors of refraction are made prior to its education.

8. A knowledge of the possible effects of eye-strain on mental and physical development can not be too widely disseminated among parents and teachers.

9. The direct causal relationship between "eye-strain" and nervous diseases is too well established to-day to require further proof, or even to justify further discussion.

10. The modern methods of testing for anomalies of adjustment of eye-muscles are the only ones that can furnish us with scientific and accurate information.

The time has happily passed when any oculist can instruct a patient to simply follow with the eyes some object held before the eyes, and then on that test alone give a final decision as to whether mal-adjustment of the eye muscles exists or does not exist.

11. The cure of disease to day is intelligently based on the search *for its cause* rather than on an indiscriminate use of drugs; and the prevention of diseases is rapidly becoming more important to the medical mind, and also to the laity, than its cure.

Dr. C. S. N. Hallberg, Chicago, Secretary of the Section on Materia Medica, Pharmacy and Therapeutics.

12. The detection of "eye strain" in youth is an important step in preventive medicine, and the arrest of a nervous leak may save many a child from a permanent break-down when an adult.

13. The study of facial expression and head posture is destined to become an important aid in diagnosis.

14. The governing boards of institutions for the feeble-minded, the epileptic, and the insane will sooner or later be compelled to investigate more carefully and earnestly than in the past the eye conditions of their inmates.

11. Intestinal Resection.—Three cases of interest are reported by Isaacs. The first two show how uncertain the diagnosis of acute appendicitis may be, even if the symptoms are apparently clear. The first case is also of interest on account of the length of the gangrenous gut, twenty-three inches, included in the intestinal strangulation. The operation with the Murphy button was successful, the button passing the ninth day after operation, and the patient was discharged cured in four weeks. In the second case the symptoms were those of an acute attack of appendicitis with local suppuration, but examination disclosed the appendix perfectly normal, though just above it was a tumor consisting of inflamed omental and cecum adhesions matted together with the parietal peritoneum, and a large abscess was found posterior to the cecum and the ascending colon. This arose from the lumbar spine, and instead of working its way down the psoas muscle took the unusual course of working forward through the abdominal cavity, and pointing toward the site of the usual appendiceal abscess. The appendix was ligated and removed, but, as it turned out, this was ineffectual in closing the appendicular orifice, resulting in fecal fistula. The patient was a boy only eight years old, and he successfully withstood five severe laparotomies within five months, coming out none the worse excepting for the presence of scars and a possible future hernia. The third case was a strangulated femoral hernia so far advanced that strangulation of the constricted end and suppuration of the sac had already taken place The operation was performed with the Murphy button as in the other cases, and with good results notwithstanding the desperate condition of the patient, a widow 56 years of age.

Dr. Victor C. Vaughan, Ann Arbor, Mich, Chairman of the Section on Pathology and Physiology.

Philadelphia Medical Journal.

April 18.

12 *The Syphilitic Nature of Tabes and General Paralysis. Dr. Leredde.
13 Pulmonary Abscess Producing Dextrocardia: A Case Report. Thomas L. Coley.
14 Methods of Roentgen-Ray Treatment of Malignant Diseases of The Uterus, Rectum and Bladder, with Descriptions of Tubes. Margaret A. Cleaves.
15 *The Surgical Treatment of Tubercular Peritonitis. D. S. Fairchild.
16 *The Operative Treatment of Laryngeal Tuberculosis. Lorenzo B. Lockard.
17 Pernicious Anemia following Thyroid Enlargement. V. S. Merritt.

12. **Tabes and Paresis.**—Leredde holds to the syphilitic nature of these disorders and their curability under specific treatment. He does not believe in pseudo-general paralysis of syphilitic origin definitely distinct from the true disease, but there is a certain clinical type of cerebral syphilis identical with and impossible to differentiate from true general paralysis. This is singularly frequent. He believes that general paralysis in a syphilitic patient is always syphilitic in nature and may be cured if treated correctly before degeneration occurs. He gives details as to treatment, insisting on the importance of a gradual increase of the mercurial dose to avoid any sudden action of the drug.

15.—See abstract in THE JOURNAL of January 17, p. 189.

16. **Laryngeal Tuberculosis.**—Lockard believes in the surgical treatment of these cases; however, carefully selecting them for operation. For the results to be good, the lesions must be localized and accessible, the pulmonary process incipient or quiescent, and there should be general good health without hyperpyrexia, cardiac weakness and involvement of other organs, and a favorable moral and mental temperament. Lastly, and of great importance, a local, not constitutional susceptibility to cocain. The various operations, curetting, use of the knife, scissors, etc., are mentioned. He would also operate to alleviate or render stationary, disease in cases of gradually increasing stenosis, severe laryngeal tuberculosis with slight pulmonary involvement, and when new infiltrations and ulcerations occur after treatment or when local treatment can not be given on account of lack of skill or too widespread involvement, but the inefficiency of all other methods should first be demonstrated. He thinks, in any case, we may anticipate some lessening of pain, increased facility in eating and some subsidence of swelling and inflammation. When the pulmonary condition is not in itself fatal, we may also anticipate some resolution in the diseased tissues, a favorable influence on the lungs, a considerable prolongation of life and, rarely, a cure. He thinks that the treatment of a tubercular larynx should usually be the same

Dr. Joseph McFarland, Philadelphia, Secretary of the Section on Pathology and Physiology.

as a case of tuberculosis of other parts, that is, complete removal of diseased tissue at the earliest moment provided a conscientious trial of the more conservative methods has first been made.

American Medicine, Philadelphia.

April 18.

18 *A Plea for More Radical Operations in Malignant Disease of the Testicle. Charles Greene Cumston and William A. Rolfe.
19 *Bacteriologic Studies of the Skin and Throat in Cases of Scarlatina. George H. Weaver.
20 *The Treatment of Insomnia. Hubert Richardson.
21 *The Ocular Complications of Variola. Burton K. Chance.
22 Angioneurotic Purpura. Raymond Wallace.
23 *Limitations of the Dimethylamidoazobenzol Test for Free HCl in the Stomach Contents. Wilbur F. Skillman.
24 *Infection as a Factor in Tuberculosis. Woods Hutchinson.

18. **Malignant Disease of the Testicle.**—Cumston and Rolfe plead for a more thorough operation in these cases, performing not merely a castration, but dissecting out the lymph glands in the groin. The article is illustrated.

19. **Scarlatina.**—Eighteen cases of scarlatina have been studied by Weaver to ascertain the bacteria of the skin in this disease. He finds that the bacteria obtained from the cultures of the skin, epidermic scales, and the surface of the tonsil in case of scarlatina are the same as those found in the same localities during health, no one of these is constantly present except the streptococcus in the throat. On account of the numerous cocci growing in such cultures it is impossible to identify them except by complete study. If made by inexperienced persons or those who do not fully appreciate the importance of avoiding the tongue, the cultures are especially apt to contain large diplococci or sarcinæ. The streptococcus is present in the tonsil of scarlatinal patients in enormous numbers in almost every instance.

20. **Insomnia.**—The causes and treatment of insomnia are discussed at length by Richardson, who reviews the effects of various hypnotics and practically condemns them all as being toxic and producing sleep by intoxication. The methods which he would consider better are sleeping in a well-oxygenated room, keeping the bed warm, reduction of mental activity for some hours before going to bed, and the evening meal at least four hours before retiring; the use of the bath immediately before retiring and sometimes the addition of a nitroglycerin or erythrol tetranitrate tablet after the patient has gone to bed. Small doses of digitalis in neurasthenic cases will sometimes be efficient in producing sleep. In acute mania with low mean and maximum blood pressure, heart stimulants are indicated, but in chronic mania, with high mean and maximum pressure, these are useless and opiates are especially contraindicated. There are cases where hypnotics are absolutely necessary, but he thinks it is better to produce the conditions necessary to natural sleep than to give a poison which produces unconsciousness and not sleep, and which must be detrimental to the patient.

21. **Variola.**—Chance has studied the ocular complications of variola in an analysis of over two thousand cases at the Municipal Hospital at Philadelphia. He finds ocular affections common, occurring sometimes in the acute stages and again not until convalescence, or they may be seen for the first time as sequelæ. The skin of the lids is commonly a site of the pustulous eruption and the eye may not be opened for several days. In such cases severe conjunctivitis is present and often leads to corneal ulceration and abscesses may occur on the lids later The lachrymal passages may become inflamed and destroyed. Inflammation of the conjunctiva itself is usual, but shortly passes away. The intensity is related directly to that of pustular eruption in general. The cornea does not seem to be subject to the specific lesion of variola, though ulceration does occur independently of the general process as a consequence of conjunctival disease. Inflammation may be only a slight superficial haze or may involve the entire membrane. In severe cases rapid destruction of the cornea may take place as early as the eighth day. Sometimes both the eyes are affected. Two cases of parenchymatous keratitis were observed. Old vaccination, though not effective against the smallpox seemed to relieve the corneal complications to a considerable extent. The uveal tract seemed less likely to be affected than the cornea. Iritis was observed in a few cases. In no case was there circumscribed choroidal inflammation or posterior polar cataract. Chance can report no case of glaucoma, retinitis or neuro-retinitis, though other observers have reported such. While kidney disease was common it did not progress far enough to result in any case of albuminuric retinitis. He has not found any cases of hemorrhage into the retinal sheet or optic nerve reported as actually observed.

23. **Dimethylamidoazobenzol Test.**—Skillman finds certain limitations of this test for free HCl in the stomach, which he summarizes as follows:

1. If the test for lactic acid is positive, Gunzburg's or Boas' reagents, or some other method, should be used to determine whether our dimethyl reaction is due to lactic acid or to free HCl.
2. If the stomach is normal both as to size and position and the peristaltic function is unimpaired, then dimethyl will give fairly accurate results.
3. If the size and position of the stomach are not normal (gastrectasis or gastroptosis), or if the peristaltic function is delayed, then Gunzburg's or Boas' tests should be first performed to test positively whether free HCl is causing reaction, or whether it is caused by organic acids, before proceeding to titration with dimethyl.

24. **Tuberculosis.**—Hutchinson gives an interesting résumé of the present conditions of the question of bovine and human tuberculosis, disagreeing with Koch as to the harmlessness of bovine tuberculosis to man, though he admits his general statement as to the transmission of human tuberculosis to cattle. As regards actual infection from individuals, he finds little to support the extreme opinions which have gained ground. The general balance of evidence in regard to the rôle of infection in tuberculosis seems to him to point to the view that while the introduction of infectious material is necessary, the most potent factors in determining the questions of the development of the disease are those of the soil, viz., resisting power, and environment. He believes there is considerable in the *habitus phthisicalis*, that is, special conformation and physiognomy of those most subject to phthisis, and gives special importance to a high chest index, namely, the relation between the anteroposterior and the transverse diameters of the chest. This is high in consumptives, that is, the phthisical patient has a more round than flat chest. It is a persistence of the fetal condition. He believes in guarding against infection by every possible means; meat and milk inspection, tuberculin tests, destruction of sputum, notification of cases, prevention of expectoration in public, but twice as important, in his opinion, are well-aired rooms, good food, short hours of indoor work and an open-air life.

Boston Medical and Surgical Journal.

April 16.

25 *A Case of Interscapulo-Thoracic Amputaton for Sarcoma of the Brachial Plexus. F. B. Lund.
26 *The Diagnosis of Gonorrheal Urethritis. Alfred H. Gould.
27 *Cream for the Home Modification of Milk. Charles W. Townsend.
28 *Variation in the Composition of Human Milk. Philip P. Sharples and Eugene A. Darling.
29 *Trikresol in Para-urethral Abscess. M. L. Heidingsfeld.

25. **Interscapulo-Thoracic Amputation for Sarcoma.**—The case reported by Lund was a patient 40 years of age, of good muscular development, operated on for sarcoma of the brachial plexus following injury. Rupture of the axillary vein had occurred in attempted removal, and it was relieved by suture and subsequent interscapulo-thoracic amputation was performed with good results, and no recurrence after three months. The points of special interest are the close relations in time between the development of the tumor and the injury of the arm. The early paralysis of the median nerve, while the other nerves were not affected except by pressure, pointed to the origin of the tumor in this nerve. Lund summarizes the indications for this operation: 1. In the majority of cases of malignant disease of the humerus, and especially any that involve the tissues about the shoulder joint. 2. In malignant disease in the axilla involving the axillary vein, which can not be ligated without sacrificing the arm 3. In extensive injuries, where the scapula has been partially or completely torn away, or the skin over the deltoid has been destroyed, so that it is not available for the covering of an ordinary shoulder-

joint amputation. Points in the technic are noted, the importance of ligating the artery before the vein, and of cocainization of the trunks of the brachial plexus before division, which seems to have no effect on the pulse.

26. **Gonorrheal Urethritis.**—Gould insists on the importance of culture tests as well as microscopic tests to positively establish the identity of the disease. He advises the following general routine method: 1. Cleansing the meatus with water and passing the urine into a sterile test tube. This is centrifugalized in two sterile centrifugal tubes, and the overlying fluid poured off. The sediment is used for cultures. If a few gonococci are found in the first tube, the second tube is treated in the same manner. The Gram stain should always be used. In making culture media he found hydrocele fluid most practicable.

27. **Cream for the Home Modification of Milk.**—The conclusions of Townsend's article are given in the following:

1. Centrifugal cream is probably less desirable for infant feeding than gravity cream. As obtained from dealers it is often far from accurate in percentage.
2. Siphonage for obtaining gravity cream is an accurate method, but one requiring considerable skill to perform accurately and safely.
3. Dipping off the top milk is an accurate and safe method if reasonable care is used.
4. The method for obtaining gravity cream by pouring off the top is very accurate and extremely simple. There is no instrument to be bought and kept clean. By this method it is possible to obtain cream of any desired percentage up to 26 per cent.
5. To ensure perfect accuracy, frequent examinations with the Babcock machine are required; but for practical purposes this is not necessary, provided the mixed milk from a well-regulated dairy is obtained.

28. **Human Milk.**—Sharples and Darling have systematically analyzed samples of human milk collected under uniform conditions. The details of their methods are given. They find that the average composition of human milk as shown by 117 analyses is:

Fat	2.91	Ash	0.13
Sugar	7.01	Total solids	11.39
Proteids	1.34	Solids not fat	8.48

Very wide variations from the average occur in some individuals at different times and marked variations in the average composition from different individuals The average composition of human milk does not vary markedly at different periods of lactation, but during the first lactation it is weaker in fat and proteids and stronger in sugar than in subsequent lactations. These differences may or may not be due to age.

29. **Para-Urethral Abscess.**—Heidingsfeld gives his experience with four cases of para-urethral abscess following gonorrheal infection and treated by injections of trikresol. In all four it effected a complete cure in from seven to fourteen days, and materially shortened an exceedingly obstinate and distressing gonorrhea. He speaks rather strongly in regard to the utility of this preparation in such cases, and thinks it warranted in every accessible case until its efficacy, unfailing or otherwise, is fully established.

Medical News, New York.

April 18.

30 *Intestinal Indigestion (Dystrypsia). John C. Hemmeter.
31 *A Brief Review of Some of the Etiologic Factors in Intestinal Dyspepsia. E. Franklin Smith.
32 *The Rational Treatment of Tetanus: A Report of Successful Treatment by Spinal Subarachnoid Injections of Antitetanic Serum. W. H. Luckett.
33 *Notes on Systemic Infections by the Staphylococcus Aureus. E. Libman.
34 *Itching: Its Occurrence Both as a Concomitant and as a Cure of Disease. Edward B. Bronson.
35 The Roentgen Ray: Its Mechanics, Physics, Physiology and Pathology. Eden V. Delphey.
36 The Congenital Criminal. Robert T. Irvine.

30. **Intestinal Indigestion.**—The different forms of intestinal indigestion are noted by Hemmeter, who commences with a discussion as to the gastric function, showing the importance of psychic incitation to gastric secretion. It is important first of all, in order to have a normal intestinal digestion to see that the mouth and stomach are in good order. He points out the differences between the jejunal and the catarrhal types of the stools; the former is very rich in bile pigments, with slight fecal odor and generally of an acid reaction, bearing evidence of simply being hurried through the intestine, while the catarrhal shows the presence of epithelium and round cells from the mucous membranes which are absent in the jejunum stools, and it is dependent on general enteritis. The dystrypsia due to carbohydrate fermentation which gives rise to jejunal diarrhea is important because it may entail an ultimate enteritis in either adult or infant. It is not an easy matter to decide between a normal and abnormal, quantitative or qualitative, presence of starch in the feces, but if they give a marked primary fermentation according to Adolf Schmidt's test, he excludes starch from the diet. Normally, Lugol's solution should show no blue color in the stools. An abundance of undigested muscle fibers after a weighed test diet is always significant of abnormal intestinal digestion, and if the nuclei in the muscle fibers are very evident it signifies abnormality of the pancreatic secretion. The presence of connective tissue is another significant point indicating gastric indigestion. According to Hemmeter's experience it is impossible to succeed with a radical enforcing of strict diet of any kind, but he advises a "bland diet"; foods that pass the intestinal canal undigested should be avoided. He makes it a rule to prohibit alcohol, tea, coffee and tobacco, but with great exhaustion he allows small quantities of alcohol under the strictest control. The diet can not be regulated until a dietetic experiment is made. The same holds true as regards constipation. We must ascertain whether this is due to atony or spasm. The majority of these patients require exercise after meals; a few may require rest. Great care must be exercised as regards the last meal of the day; a heavy supper will often produce a restless night. Hypnotics should be avoided for insomnia, and any neurasthenia properly combated. He has been able to get along without intestinal antiseptics, and has seen bad results from irritating drugs of this kind. Creosote, even in small doses, generally deranges the stomach. He gives a number of formulas for special symptoms.

31. **The Etiologic Factors of Intestinal Dyspepsia.**—The first of the exciting causes noted by Smith is the pathologic and anatomic alteration of the intestinal walls, nerves, lymphatics and blood vessels. 2. The absence or deficiency of the intestinal digestive secretions, especially of bile and pancreatic juice. 3. Intestinal indigestion due to qualitative or quantitative irregularities of diet. 4. Intestinal dyspepsia due to abnormal bacterial activity. 5. That due to abnormal gastric chemistry. 6. That of nervous origin—neurasthenia intestinalis. 7. Intestinal dyspepsia caused by abnormal substances, or irritation, reaching the intestines from the blood, as in uremia, severe malaria, septicemia, croupous pneumonia, erysipelas, cholera, etc. 8. Intestinal dyspepsia due to the activity of the intestinal parasites (exclusive of bacteria). 9. That due to hyperperistalsis or excessive motility of the bowel, motor, sensory, secretory neuroses, etc. All these are discussed in detail.

32. **Tetanus.**—Three cases are reported by Luckett, two recovering under intraspinal injections of tetanus antitoxin with withdrawal of a certain amount of cerebrospinal fluid. No attempt was made to maintain an equilibrium between the amount of spinal fluid withdrawn and the amount of serum injected, the former ranging from 100 to 140 drops and the latter usually 8 to 12 c.c. of antitoxin. He holds that this fact indicates that the shock or collapse following spinal subarachnoid injection of cocain is not due to any upsetting of equilibrium of pressure, but is due solely to the physiologic action of the cocain. In case of a tetanus infected wound he is not by any means positive that the anatomical seat of the wound does not play an important rôle in the production of the constitutional symptoms of tetanus; if near a large nerve it will be more likely to be followed by constitutional effects. While recognizing the absurdity of trying to draw conclusions from two cases, in the two patients who recovered the reaction after each injection was so prompt and the improvement so positive that he believes spinal subarachnoid injection of tetanus antitoxin, preceded by the withdrawal of the active, concentrated, highly toxic spinal fluid, supplemented by forced nutrition and proper care of wound, is a very promising method of treatment, offering more hope than any other in this dreaded disease.

33. **Staphylococcus Infection.**—Libman has examined 23 cases of osteomyelitis in septic conditions and found in all of them the *Staphylococcus aureus* in the blood during life. In 330 other blood cultures he has never seen a single colony of *Staphylococcus aureus.* Five of these 23 cases recovered. It does not necessarily follow that the greater the number of bacteria in the blood, the less the chance of recovery. The number of bacteria depends in some cases at least on the time when the examination is made, as the great tendency is for the body to rid itself of bacteria.

34. **Itching.**—Bronson reviews the causes of the symptom of itching and its treatment. Scratching is the natural remedy for itching, but may do more harm than good, but the principle of transference or substitution of sensation, used in scratching, is also applied in other remedies. One of the most valuable of them is menthol, which is not an anesthetic, but relieves itching as it relieves pain, by substitution for this sensation, the disturbance of temperature sense. A 2 to 4 per cent. alcoholic solution is most effective. Other remedies act as cutaneous anesthetics, as hot water, camphor, etc., and of the local anesthetics, carbolic acid is the most valuable and has the most lasting effect. To obtain its best effect it should be used strong. Its corrosive action on the skin is its chief objection. It is well to bear in mind the possibility of carbolic poisoning, though if ordinary caution is observed there is not much danger. The danger of injury to the skin from the caustic action is a more imminent one. We can use subsequent applications of alcohol if necessary. Generally he has found a drying oil, linseed more particularly, the best corrigent. The following is the prescription which he recommends:

℞. Liquor potassi	ʒi	4	
Acid carbolici	ʒii	8	
Olei lini q. s. ad	℥i	30	
Olei verbenæ	m. ii		12

M.

There is not much to be said for internal remedies, but where an urticarial element is prominent, there would seem to be an indication for motor depression to overcome the spastic contractions of the skin muscles. Atropin and pilocarpin are sometimes prescribed, but he does not strongly recommend them. In toxic urticaria there is an indication for antiseptic remedies and with the form due to errors of diet or dependent on idiosyncrasy of the individual, a brisk emetic or later a saline purge may be effective. In senile pruritus he speaks particularly of general stimulation of the skin by elimination, faradization, etc., with internally cannabis indica and strychnia. For pruritus hyemalis it is important that digestion and general nutrition should be kept up and alcoholics avoided. Bath pruritus is more difficult to control, and some times the addition of salt to the water makes it less irritating. For pruritus of the anus or genitals the cause should be searched out, all possible sources of reflex irritation looked for as well as any general condition like lithemia, neurasthenia, or diabetes. Among the local remedies he mentions lotions of aluminum acetate, Lassar paste, without salicylic acid, or with 2 or 3 per cent. carbolic acid. Orthoform may do well if inflammation exists and until it is allayed. Cocain is sometimes useful, but not good for prolonged use. The sovereign remedy for pruritus vulvi or ani is carbolic acid. A single application of the prescription above given is sometimes efficient for the whole night, but it should not, however, be applied too lavishly or too often; more than one or two applications in twenty-four hours would be likely to do injury. Hot water is often useful. Other remedies are also mentioned.

Cincinnati Lancet-Clinic.

April 18.

37 The Future of Gynecology and of Obstetrics. Wm. D. Porter.
38 The Care of Obstetric Cases. Julia W. Carpenter.
39 Cephalalgia. Mark D. Stevenson.
40 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

St. Louis Medical Review.

April 11.

41 *Fistula of the Cornea. James M. Ball.

41. **Fistula of the Cornea.**—This condition, which is rare in occurrence, is treated by Ball as follows:

> The keratome is to be introduced into the anterior chamber as in the first step in the operation for iridectomy. The tip of the instrument is to pass beyond the fistulous area, and the instrument is then to be held *in situ* while a cautery is used to destroy the epithelial lining, the tag of iris-tissue which is often present in the fistula, and the bulging bleb of Descemet's membrane. The keratome is to be withdrawn carefully to avoid injury to the lens. Atropin and a compress bandage are to be used in the after-treatment. During the operation the lids should be separated by a speculum and the eyeball should be fixed with forceps. It is necessary that the forceps should be placed several mm. behind the point at which the keratome is to be introduced. If the forceps be placed on the globe at a point opposite the place at which the keratome is to be passed, the globe may be subjected to sufficient pressure to cause a rupture of the weakened area. The operation must be postponed until such time as the anterior chamber shall have reformed.

Bulletin of the Johns Hopkins Hospital, Baltimore.

March-April.

42 Plague in the Orient. William J. Calvert.
43 *Pemphigus Vegetans. L. P. Hamburger and Maurice Rubel.
44 *The Taste Fibers and Their Independence of the N. Trigeminus. Harvey Cushing.
45 On the Use of Clay Modeling in the Study of Osteology. Robert O. Moody.
46 The Treatment of Aural Exostoses. H. O. Reik.

43. **Pemphigus Vegetans.**—Hamburger and Rubel report a case with details, autopsy findings and bacteriologic examination. The condition is a fatal one and was best relieved by continuous immersion under water. Cultures revealed the presence in the mouth of small bacteria in almost pure culture, allied apparently to the pseudo-diphtheria bacillus. After the death of the patient, the *Micrococcus lanceolatus* was isolated from the lungs, and a pseudo-diphtheria bacillus from the blood. Blebs showed the staphylococcus. The article is elaborately illustrated.

44. **The Taste Fibers.**—Cushing has analyzed the literature and a number of cases of his own observation to determine whether the taste fibers reach the tongue through the trigeminus or not. Judging from the uniform results of observation, he says it may be said in conclusion:

> 1. That the perception of taste is unaffected on the posterior portion of the tongue and never permanently or completely lost on its anterior two-thirds after removal of the Gasserian ganglion. 2. That a temporary abolition or lessening of the acuity of taste may be found to exist over the anterior and anesthetic portion of the tongue for some days after the operation. 3. That this temporary loss of function may possibly be occasioned by some interference with chorda transmission brought about by a mechanical or toxic disturbance due to degeneration of the N. lingualis. 4. That a lesion of the trigeminal nerve may be associated with disturbance of taste over the chorda territory without the necessary inference that the nerve is a path for gustatory impulses. 5. That the N. trigeminus in all probability does not convey taste fibers to the brain either from the anterior or posterior portion of the tongue.

Cleveland Medical Journal.

April.

47 *The Occurrence of Cheyne-Stokes' Breathing in Acute Disease, with Report of a Case. H. C. Mabley.
48 On the Value of Obtaining the Urine from Each Kidney Separately, with a Description of the Different Methods Employed. William E. Lower.
49 A Case of Face Presentation—Mentoposterior Position. F. S. Clark.
50 Instructions Issued by the German Government for the Education of the People on Tuberculosis. Translated by John H. Lowman.

47. **Cheyne-Stokes' Breathing.**—Mabley notes this special symptom and gives illustrative cases personally observed and others from the literature. He thinks the condition is not by any means necessarily associated with chronic disease, though the literature gives but little material in regard to its occurrence in acute conditions.

Annals of Surgery, Philadelphia.

April.

51 *Splenopexy for Wandering Spleen. J. Basil Hall.
52 *Urethroplasty. Albert A. Berg.
53 *Carcinomatous Changes in an Area of Chronic Ulceration, or Marjolin's Ulcer. John C. DaCosta.
54 A Case of Dislocation of the Hip in Acute Rheumatism. J. N. Hall.
55 *Instrument to Protect the Brain While Doing Craniotomy with Gigli Saw. Frederick C. Schaefer.
56 *Primary Tuberculosis of the Breast. W. S. Schley.
57 *The Diagnosis of Intestinal Injury Following Abdominal Contusion. Robert G. LeConte.
58 *Hepatic Duct Stones. Raymond C. Turck.
59 *Primary Carcinoma of the Vermiform Appendix, with a Report of Three Cases. Arthur W. Elting.
60 *The Surgical Treatment of Anuria. Arthur D. Bevan.
61 *Results of Decapsulation of the Kidney. Harold A. Johnson.

51. **Splenopexy.**—Hall reports a case successfully operated n. The conditions were good for splenectomy, but noticing hat there was a peculiar structure of the spleen which favored ts attachment, the notch being specially situated so as to nake sure of an anchorage, he adopted the plan of splenopexy vith good results. Of course, this would not be advisable in every instance.

52. **Urethroplasty.**—Berg describes the various methods of performing urethroplasty and reports two cases showing the usefulness of Guyon's operation—that is insertion of a catheter and allowing regeneration over it between the two divided ends—which he holds is the most universally applicable method, though not so ideal as the union of the two ends.

53. **Marjolin's Ulcer.**—Two cases of this condition are reported by DaCosta, who discusses the origin of the cancer from chronic ulcer. He does not adopt the parasitic view, though certain things seem to favor it, such as metastases, etc. He cautions in regard to diagnosis, especially in cases where there has been a pre-existing induration, and the possibility of a syphilitic condition is mentioned. When a positive diagnosis is made of cancer of this sort on the extremities, the only course is amputation well above and removal of the anatomically related glands. The *x*-ray may be tried before amputation if the glands are not obviously enlarged.

55.—This article appeared in THE JOURNAL, Jan. 24, p. 246.

56. **Primary Tuberculosis of the Breast.**—Schley reports a case of this condition and discusses its pathology. The condition is evidently not a common one. It may be mistaken for simple cyst, fibro-adenoma, carcinoma, sarcoma, gumma and actinomycosis. It may also be necessary to distinguish the process from chronic interstitial mastitis. The treatment consists in removal.

57. **Intestinal Injury from Contusions.**—Several cases of this condition are reported by Le Conte and the symptoms and diagnosis analyzed. He thinks that a moderately sure diagnosis of injury must be made before operation is undertaken or we will frequently find no internal trauma, and that the teachings of modern writers who urge operation in all cases presenting pain, rigidity or local tenderness are too radical. The presence of shock is not sufficient for diagnosis. We must wait for reaction. No one symptom is pathognomonic, but the most reliable ones are gradually increasing rigidity and facial expression. Next he would place deep and perhaps radiating abdominal pain, respiration which becomes more and more thoracic, vomiting after shock has ceased, distension, increasing pulse-rate, and secondary fall in temperature. The order of these symptoms is unimportant. Any individual who has received an abdominal contusion sufficiently severe to call for service needs the most constant and careful watching for grave symptoms. We should not wait for them to become so pronounced that a positive diagnosis is assured, but there is a safest position midway between operation on every case and waiting for assured diagnosis.

58. **Hepatic Duct Stones.**—Turck emphasizes the importance of a thorough search for calculi in the hepatic duct and their removal if existing. He thinks it is safer to assume that stones may be formed in the bile ducts independently of gall-bladder influences, and unless the case is undoubtedly uncomplicated, or one with a few or a single large stone in the ducts, with no sign of cholangitis and with the bile clear, simple gall-bladder drainage, removal of the mucous membrane and cholecystectomy may all prove insufficient and drainage of the hepatic duct by tube through a direct incision or common duct opening should be instituted.

59. **Primary Carcinoma of the Vermiform Appendix.**—From a careful study of the subject including examination of three cases, Elting draws the following conclusions:

> 1. Primary carcinoma of the appendix is not of such rare occurrence as has been hitherto supposed. 2. Every appendix removed at operation or autopsy, if it presents any evidence whatever of disease, should be examined most carefully, and sections should be made from several portions of the organ for microscopical study. 3. The relationship of primary carcinoma of the appendix to chronic appendicitis, especially of the obliterative type, seems to be fairly definitely established. 4. Primary carcinoma of the appendix shows a tendency to develop at a comparatively early period of life. 5. Primary carcinoma of the appendix does not show a marked tendency either to extension or to metastasis. 6. The symptoms of primary carcinoma of the appendix are usually the symptoms of appendicitis of the chronic type. 7. The diagnosis of primary carcinoma of the appendix is in the great majority of cases impossible. 8. The treatment of the condition should always be operative.

60. **Anuria.**—Bevan reports a case and discusses the conditions which may be due to obstruction, traumatic or otherwise, from acute nephritis, from tuberculosis from degenerative conditions, from certain poisons, from a peculiar condition known as urethral fever and hysteria. He draws the following conclusion from his study as regards the operation:

> 1. The clinical importance of recognizing the three forms of anuria—obstructive, reflex and non-obstructive—is to be emphasized. 2. The imperative necessity of surgical interference in the obstructive and reflex forms, and its possible value in the non-obstructive cases. 3. That in the first two varieties, at least, a rapid nephrotomy on the side of pain, tenderness, and muscular rigidity is the operation of choice. If necessary, do not hesitate to make a double nephrotomy. 4. That nitrous-oxid anesthesia is probably to be preferred. 5. That time-consuming operations to relieve permanently the obstruction are to be postponed to a later period, after the patient has recovered from the anuria. 6. Operate early, by the beginning of the third day.

61. **Kidney Decapsulation.**—Johnson has experimented on fifteen dogs, of which 5 died, and gives a summary of his findings. The capsule of the normal kidney consists of two distinct layers, the outer being much the thicker, while the inner is very thin, the direct continuation of the intertubular connective tissue. In the operation of decapsulation the outer layer only is removed, leaving the inner lacerated but adherent to the kidney's surface. At first a thin exudate appears on the free surface of the kidney, which gradually becomes a fibrous investment, resembling the normal capsule in that it strips readily and becomes more and more firm with time. Microscopic examination shows this to be of varying degrees of thickness, and a homogeneous mass of fibrous tissue which will form under adhesions and can be recognized as distinct from them both macroscopically and microscopically. There is sometimes an infiltration with round cells and a proliferation of the intertubular connective tissue of the cortex, without, however, affecting the glomeruli or the general health of the dogs. Lastly and most important is that in no case was there any considerable anastomosis between the renal and perirenal blood channels. Applying these facts to operations on the human subject, he does not find that Edebohl's claim is sustained that the benefits sometimes derived from this operation are due to the establishment of a collateral circulation, but rather that they are due to relief of tension from splitting the capsule of the kidney.

Interstate Medical Journal, St. Louis.

April.

62 *The Diagnosis and Treatment of Hemorrhoids. James P. Tuttle.
63 *The Heart in Neurasthenia. Frank P. Norbury.
64 What the von Langenbeck Operation Accomplishes in Individuals with Cleft Palate. Willard Bartlett.
65 Treatment of Verruca Plana Juvenalis, with Report of Two Cases. M. F. Engman and W. P. Loth.

62. **Hemorrhoids.**—Tuttle's article is somewhat lengthy, describing the various types of hemorrhoids and their treatment. He believes that in the varicose type of internal hemorrhoids there is a field for the injection methods. In purely internal hemorrhoids, which prolapse through a relaxed sphincter, not ulcerated, this method will frequently give us excellent results. The method, however, is tedious and may be painful. He does not use ligation, but has employed an operation of excision, adapted from the methods of various authorities. He does not advise this, however, to the general practitioner, but counsels him to hold to the old, simple efficient plan of clamp and cautery in the operative treatment of piles.

63. **The Heart in Neurasthenia.**—Norbury calls attention to the heart symptoms occurring with neurasthenia, disturbance of the rhythm, usually increased, acceleration, the Rumpf symptom, palpitation after eating and the general symptoms of heart weakness. The condition does not usually improve until the neurasthenia is well under way of convalescence. He believes in diversion as a part of the rest cure in these cases. The details are largely in regulating sleep, promoting digestion, the use of tonics, care as to the bowels and a careful consideration of nutrition in general.

Albany Medical Annals.

April.

66 *The Unusual Symptoms of the Weakened Foot. Arthur W. Elting.
67 *Ocean Traveling as a Therapeutic Measure. John Hall.
68 *Albany Hospital; First Report of Pavilion F, Department for Mental Diseases, for the Year Ending Feb. 28, 1903. J. M. Mosher.
69 Albany Hospital Report of the Pathologist on the Work Done from March 1, 1902, to March 1, 1903. George Blumer.
70 A Late Laparotomy for Gunshot Wounds of the Intestines; Eleven Perforations; Recovery. James H. Mitchell.

66. **The Weakened Foot.**—Elting discusses the condition and its treatment and describes cases where severe cramps of the calves, pain in the knee and hip joints were experienced as also the symptom of meralgia parasthetica, which has also been attributed to this condition by Pal.

67. **Ocean Traveling.**—The advantages of ocean traveling for invalids are discussed by Hall, who also points out the drawbacks and insists on good judgment in the careful selection of cases to be benefited in this way. The same problems arise as regards land traveling. He thinks it is best not to be too ready to prescribe traveling for a patient because he has the means.

68. **Mental Wards in General Hospitals.**—The first report of Pavilion F. of the Albany Hospital is given by Mosher, who shows a total of 174 cases treated, with 57 recoveries and 53 improved. He finds many advantages in the plan of having a mental ward attached to a general hospital, though it is unsuited for a certain proportion of cases. The principle, he says, may be stated that any patient whose case may be regarded as curable by the means at hand should share the advantages of this style of ward. He speaks highly of the benefit of putting the male wards in charge of female trained nurses.

Illinois Medical Journal, Springfield.

April.

71 *Hemorrhoids: Their Pathology; Indications for and Technic of Operative Treatment. J. Rawson Pennington.
72 *Acute Gastro-enteric Infection of Infants. Margaret T. Shutt.
73 *Six Years in a Dermatologic Clinic. E. A. Fischkin.
74 A Case of Grippe Infection Resembling Puerperal Fever. Joseph Brayshaw.
75 An Unusual Case of Typhoid Fever. J. W. Kelly.
76 Consistency in Medical Practice. J. N. Nelms.
77 The General Practitioner and His Surgery. W. C. Bowers.

71. **Hemorrhoids.**—Pennington describes his operation. It consists in cutting out a section of the mucous membrane covering the pile and removing angiomatous tissue, treating each quadrant of the anus in regular order. A stream of hot sterilized salt solution (115 to 125 F.) flows over the parts continuously during the operation. Spurting vessels, if any, are caught with forceps and thoroughly twisted and, if necessary, ligated. All external tumors and tabs of skin are cut off, care being taken not to make any incision in the muco-cutaneous junction. The field is then dusted with some antiseptic powder and dressed in an extended posture by means of a rubber-covered tampon introduced through a bi-valve speculum, which protrudes about 1.5 inches beyond the anal orifice. Gauze is carefully wrapped around the protruding portion and the whole confined with a T-bandage. The patient is placed in bed and given a hypodermic of morphin, if not contraindicated, and at the end of forty-eight hours is given a cathartic and the tampon removed. From this time on until convalescence is well established, the parts should be washed or irrigated daily with an antiseptic solution, dusted with some antiseptic powder, or sterilized vaselin applied. The bowel should be kept soft for two or three weeks, and wet cotton or cottonoid used as a detergent. He finds this one of the best and most reliable operative methods.

72.—This article is practically the same as that published in The Journal, xxxix, p. 244.

73.—This article appeared in The Journal, Aug. 23, 1902.

Texas Medical Journal, Austin.

April.

78 *Neurasthenia in Relation to the Abdominal Diseases of Women. Henry E. Leake.
79 *A Study of Nature's Method for the Cure of Asiatic Cholera. W. B. McLaughlin.

78. **Neurasthenia in Women.**—Leake objects to the reflex theories of neurasthenia, holding that they have been largely overdone. Men's minds have been unduly strained in this direction. The nervous and physical weaknesses so often accompanying abdominal disease in women is not true neurasthenia or strictly pelvic reflexes. He mentions especially, as one of the most intractable symptoms in neurasthenic women, mucomembranous colitis, which is so common that he invariably assumes it to be present in some degree. His experience with it has been large, but not always satisfactory. He protests against the prevailing indiscriminate operations in abdominal conditions.

79. **Asiatic Cholera.**—McLaughlin considers the cholera germ especially sensitive to heat, and believes that Nature attempts to rid the organism of it by vomiting and purgation. If she can not accomplish this by these alone she raises the bodily temperature to a point that interferes with or inhibits its growth. These processes, however, are a severe tax on the vitality, and the febrile process once started may refuse to be controlled, and the patient dies of hyperpyrexia. In McLaughlin's opinion, heat in cholera is an analogue of Behring's antitoxin in diphtheria. Thus he reasons that by causing an early rise of temperature in cholera patients we also lower the mortality. He reports the results of the use of normal salt solution at 112, injecting above the sigmoid flexure in five cases. The first case was moribund at the time and died, the second died within ten hours of hyperpyrexia. After this the temperature of the injection was reduced from 112 to 110 and an ice bag applied to the patient's head during its administration. The three remaining cases made good recoveries, entering the stage of reaction in each case within an hour of the administration of the injection. Illness compelled him to leave the Philippines at this time, and he has had no opportunity to give the method a further trial.

Medical Age, Detroit, Mich.

April 10.

80 Reflex Neuroses in Women. Edward B. Ward.
81 Tumors of the Bladder. Robert Grossmann.
82 Antitoxin in the Treatment of Diphtheria. W. Thornton Parker.

Medical Fortnightly, St. Louis.

April 10.

83 The Use of Mercury in Syphilis. David W. Reid.
84 Psoriasis and Its Treatment. Charles J. S. Digges.
85 Diseases of the Lungs and Pleura (Pulmonary Emphysema). Albert Abrams.

Virginia Medical Semi-Monthly, Richmond.

April 10.

86 Conception in Species, Pregnancy, Sexuality, Etc. Jesse Ewell.
87 Disease of the Antrum of Highmore, and Its Treatment. J. Stiff.
88 Chloroform as a Surgical Anesthetic and Its Administration. Manfred Call.
89 Gunshot Wounds of the Stomach, with Report of a Case. F. Lawford.

Medical Herald, St. Joseph, Mo.

April.

90 Apoplexy: Remarks for the General Practitioner. Hugh T. Patrick.
91 The Brain: Its Relation to Mind and Soul. T. E. Potter.
92 The Diagnosis of Gallstones. A. L. Wright.
93 A Plea for Prostitution. Albert S. Ashmead.
94 Fracture of the Cranium. Thomas M. Paul.

Occidental Medical Times, San Francisco.

April.

95 Address, San Joaquin Valley Medical Society. J. L. Carson.
96 The Municipal Control of Milk Supply as an Important Sanitary Measure. G. H. Aiken.
97 The Subarachnoid Injection of Cocain. A. J. Pedlar.
98 Iritis: Its Symptoms and Treatment. D. H. Trowbridge.
99 End Result Four Years After a Pus Joint at the Knee. Harry M. Sherman.
100 Is Surgical Treatment to Be the Routine Treatment in Basedow's Disease? W. Winterberg.
101 Pancreatic Calculus. L. W. Allen.
102 Report of a Case of Tuberculosis of the Cornea, Iris and Ciliary Body. A. Barkan.

Chicago Medical Recorder.

April 15.

103 *The Diagnosis of Pneumonia. Arthur R. Edwards.
104 *The Treatment of Pneumonia. James B. Herrick.
105 The Pulmonary Aspects and Complications of Influenza. Frank S. Johnson.
106 The Treatment of Influenza. Robert H. Babcock.
107 Abdominal and Vaginal Cesarean Section as Means of Accomplishing Accouchement Forcé. J. Clarence Webster.

108 *Pneumococcus Septicemia Joseph L Miller
109 Report of a Case of Stammering and Methods of Treatment James M Brown
110 Uremia A Gaebler

103 —See abstract in THE JOURNAL of April 11, p 1017

104 —Ibid , p 1018

108 —Ibid p 1017

Denver Medical Times.

April

111 Report of Cases of Fracture in the Shaft of the Femur I B Perkins
112 X Ray Report of Above Cases S B Childs
113 Address Denver and Arapahoe County Medical Society Leonard Freeman
114 The Preparation of Surgeons Nurses and Patients for Surgical Operations and Remarks Regarding Trained Nurses Harlan Trask
115 A Successful Treatment of Rheumatism H H Fletcher

Physician and Surgeon, Detroit and Ann Arbor, Mich.

January

116 The Study of Older Medical Writings James B Herrick
117 Excision of the Knee for Chronic Rheumatism Theodore A McGraw
118 The Surgical Treatment of Procidentia Uteri Reuben Peterson
119 Surgery in Hydrocephalus Daniel LaFerte

Journal of Medicine and Science, Portland, Me.

April

120 Puerperal Insanity J L Pepper
121 Report of Cases Operated upon at the Maine Eye and Ear Infirmary, in January, 1903 E E Brown
122 Early Sign of Tuberculosis T F Chmelicek Luhan

Washington Medical Annals.

March

123 Intussusception—Report of a Case Reduced by Operation George T Vaughan
124 Case of Hysterectomy for Fibroids D Percy Hickling
125 Case of Cancer of the Male Breast, Excision Edward A Balloch
126 Cases of Myomectomy and Hysteromyomectomy During Pregnancy W Sinclair Brown
127 Case of Fibromata of the Scrotum, Excision Edward A Balloch
128 Case of Cancer of the Cecum, Excision Edward A Balloch
129 Perforating Ulcer of Foot, Amputation of Leg R F Sillers
130 A New Sphygmomanometer J B Nichols
131 Pathological Conditions in the Temporal Bone and Sequelæ C R Dufour
132 Splenic Infections with Reports of Cases Requiring (1) Splenotomy and (2) Splenectomy A L Stavely
133 Operation for Cataract with Report of 65 Cases E Oliver Belt

Oklahoma Medical News-Journal, Oklahoma City.

April

134 Non Recurrence of Sarcoma Ten Years After Amputation of the Lower Trochanter John A Wyeth
135 The Treatment of Itching Edward B Bronson
136 Tonsillitis in Children J A Reck

Iowa Medical Journal, Des Moines.

April 10

137 Death Returns in Iowa s Cities and the Profession F I Herriott
138 The Roentgen Ray in Diagnosis and Therapy J Rudis Jicinsky
139 A Case of Septic Meningitis Treated with Intravenous Injection of Formalin Wm H Corrigan
140 Report of a Case of Puerperal Sepsis Treated with Antistreptococcic Serum W T Schwabland
141 Radical Operation for the Cure of Varicose Veins J A Bodine

Indiana Medical Journal, Indianapolis.

April

142 Concerning Medical Societies and Papers Robert Hessler
143 Preventive Medicine in Regard to Heredity E J Kempf
144 Herpes Gangrenosus Symmetrical Gangrene, Report of a Case W F Hughes

Kansas City Medical Index-Lancet.

April

145 Myositis of the Sterno cleido-mastoid Muscle J F Welch
146 Acute Appendicitis and Its Treatment (Concluded) John B Deaver
147 Some Remarks on the Complications of Pertussis Clay S Merriman
148 Tetanus—Report of Case C C Conover
149 Report of a Case of Tuberculosis J D Griffith
150 Symptoms and Treatment of Calculus Anuria E L Keys Jr

Proceedings of the Philadelphia County Medical Society.

March 31

151 A Case of Defective Speech, Due to a Form of Spinal Cord Disease Resembling Disseminated Sclerosis G Hudson Makuen
152 The Use of the Electrothermic Angiotribe in Lieu of the Employment of Ligatures in the Open Operation for the Relief of Varicocele Orville Horwitz

SYMPOSIUM ON ANESTHESIA

153 The Choice of an Anesthetic Gwilym G Davis
154 The Preparation of Patients for Anesthesia John G Clark
155 Treatment of Complications Arising During Anesthesia G W Spencer
156 The Methods of Administration of Anesthetics Edward Martin.

Dominion Medical Monthly, Toronto.

March

157 Case of Pyopneumothorax with Hemiplegia R J Dwyer
158 Report of a Case of Hemothorax—Probably Due to Secondary Carcinosis of the Lungs T B Richardson
159 A Case of Hydrothorax Fred Parker
160 A Case of Hemothorax W H Lowry
161 Cases in Practice (Appendicitis, Fracture of the Pelvis) Frank Hall

FOREIGN.

Titles marked with an asterisk (*) are abstracted below Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest

British Medical Journal, London.

April 11

1 *The Diagnosis of Pregnancy W S A Griffith
2 *On Recurrent Abortion, with Special Reference to that Form and Often Associated with Some History of Tuberculosis Due to Deficient Vitality of the Mother, or Both Parents, John W Taylor
3 *Eclampsia of Pregnancy, with Notes on the Use of Bossi s Dilator T Arthur Helme
4 Case of Dystocia Due to Uterine Myoma Cesarean Section Gilbert Kempe
5 Pregnancy Complicated by Suppurative Hydatid Cyst of the Liver Richard Jones
6 Puerperal Hyperpyrexia of Malarial Origin Percy B Spurgin
7 The Radical Cure of Inguinal Hernia in Early Infancy B H Nicholson
8 A Note on Some Radiographs Illustrating Congenital Dislocation of the Hip David Morgan
9 Clinical Lecture on the Importance of Early Removal of Doubtful Tumors of the Breast J Crawford Renton
10 *Case of Infantile Scurvy* *Hugh S Beadles*
11 The Physiological Laboratory of McGill University, Montreal W S Morrow

1 **Diagnosis of Pregnancy.**—Griffith calls attention to what he considers the leading points in the diagnosis, which are, first, amenorrhea, which is sudden and not gradual in appearance, development of the breasts and their marked activity, enlargement of the uterus reaching above the pubis, allowing one half inch for each completed month of pregnancy The fetal heart beat, of course, is conclusive, but it must be sought for according to the position of the fetus

2. **Recurrent Abortion.**—What Taylor calls recurrent abortion includes only those cases where from the beginning or some definite epoch the patient has aborted with every succeeding pregnancy, and in his own usage here, with one exception, he has restricted it to cases of initial or primary recurrent abortion, that is, the patients have never had a living child Syphilis is undoubtedly the principal cause, but there are other rare ones, such as those due to intraperitoneal adhesions, especially associated with chronic appendicitis Most intraperitoneal adhesions involving the uterus either stretch or give way or are put up with by the growing organ, but some will not allow of this, and especially those graver ones which fix the cecum and appendix to the right appendages and uterus There comes a time when the uterus can not enlarge further without starting fresh and sometimes fatal mischief, and then the uterus either empties itself or peritonitis occurs, or both abortion and peritonitis may occur simultaneously Another occasional cause of recurrent abortion is deep cervical laceration, and, of course, the criminal cases must be remembered He especially speaks here of a class of cases of nearly equal importance to those belonging to syphilis where the distinguishing features are the indications of a low vitality on the part of the mother or father, or both parents, a "strumous" family history, and what he may call the remarkable result of an essentially anti strumous" treatment when carried on for a long period of time or throughout the whole of the pregnancy He tabulates twelve cases of this class, in the majority of which there is a fairly clear history of "strumous" disease on one or both sides He treated these cases with compound syrup of phosphates, 1 dram, three times a day, and increasing doses of cod liver oil, 1 dram to one half ounce, during the whole time, also the use of viburnum, and succeeded in several of his cases in carrying a child to term In conclusion he

mentions syphilitic abortions and their difference from the type just mentioned. In the syphilitic class the tendency is an upward one, each succeeding abortion is at a later period of pregnancy and finally the child is carried to term. A dead child is usually born, but finally a living one may be expected. Secondly, the clinical history of the miscarriages themselves is different. There is almost always some difficulty connected with them, retention of products, sepsis, etc. There is also a difference in the general character of the abortion, a thicker, larger and fleshier placenta, etc. In cases where he has succeeded in carrying the child to term in the "strumous" type the children have been healthy, and he is inclined to attach a different importance to defective vitality of the mother in these cases. Everything that tends to improve her health and that of the child, including the persistent administration of lime salts and easily digested fats, is of the utmost importance.

3. **Puerperal Eclampsia.**—Helme discusses the theories of eclampsia and its treatment. He has lately employed for emptying the uterus Bossi's dilator, which, he thinks, is a powerful instrument and, if used with care, is safe and effective. He asks the advisability of ending pregnancy when convulsions occur and if the existence of pregnancy is not a vital factor in the production of eclampsia and its cessation an important feature of treatment. Another question is in regard to the wisdom of large doses of morphin hypodermically. The present day practice seems to be to administer morphin in nephritis where there is not too much destruction of renal epithelium, as in the acute forms, but to withhold it where degeneration has advanced. Does not the same apply to eclampsia?

The Lancet, London.

April 11.

12 *Infective Endocarditis Mainly in Its Clinical Aspects. T. R. Glynn.
13 *A Fragmentary Contribution to the Operative Treatment of Chronic Suppuration within the Temporal Bone. Charles A. Ballance.
14 Nerve Suture and Nerve Regeneration. (To be Continued.) Paul B. Henriksen.
15 *Some Dangers of Hypnotics. Nestor Tirard.
16 *The Surgical Treatment of Puerperal Pyemia. Ernst Michels.
17 An Example of Direct Infection in Typhoid Fever. P. Horton-Smith.
18 A Case of Congenital Parosteal Sarcoma in an Infant Arising in Connection with the Acromion Process of the Left Scapula: Removal: Recovery. Henry J. Curtis.
19 A Case of Goiter in an Abnormal Thyroid Gland. Harold S. Barwell.

12. **Infective Endocarditis.**—Glynn divides infective endocarditis, according to the facts thus far ascertained, into two principal classes: 1. Rheumatic, due to the specific organisms of rheumatism, and 2, septic, due to pyococci. In the former, according to Litten, the temperature may be high or low, the spleen enlarged, the urine gives the diazo reaction and petechial and retinal hemorrhages are common, but suppurative infarcts never occur. The lesions localize themselves and tend to develop into fibrous tissue, the infective character being gradually lost. The endocarditis, though infective in origin, is not in itself infective. In malignant endocarditis, on the other hand, the lesions preserve their infective character and tend to diffuse themselves and are not associated with the development of plastic tissue, but, rather, with necrosis. He discusses the propriety of the nomenclature, holding that "malignant" would be better than "infective" for the latter class. The etiology is discussed, and in the majority he finds general debility a precursor and chlorosis and anemia often attend it. Sometimes it is difficult to decide whether they are the cause or complications. It is found that Bright's disease may predispose to infective endocarditis, and Osler has collected numerous cases preceded by pneumonia. In his own cases there was a rheumatic history in 53 per cent. of males and 71 per cent. of females. There was postmortem evidence of chronic disease of the heart in 83 per cent. of his patients, including 8.4 per cent. where the lesion was congenital. Orth goes so far as to say that infective endocarditis does not develop on sound valves.

13. **Mastoid Suppuration.**—Ballance discusses the treatment and advocates radical measures. The ideal plan would involve in one operation all the following details: 1. Complete removal of the disease; 2, fastening of flap from the membranous meatus without causing deformity of the concha; 3, the epithelial grafting of the inner and outer surfaces of the operation cavity; and 4, the complete suture of the mastoid wound—the subsequent after-treatment being carried out by dry gauze tamponing through the meatus. All this, however, is rather impracticable, and an attempt to do too much is to be deprecated. Each step should be done thoroughly before proceeding to another. The plan of treatment which he practices is carried out in three stages; in the first stage of the operation he uses the gouge and burr for the bone operation. In dealing with the membranous meatus the flap is fashioned out of the meatus alone. The cartilage is removed from the flap, the flap is sutured to the raw surface of the mastoid flap with gossamer silkworm gut, which can be removed at the second operation. He finds when the burr is used the patients are less prone to sickness than when the gouge and chisel alone are employed. One week after the first operation the epithelial grafting operation is performed. A few days later, the earlier the better, removal of the dead portion of the graft is done and dry gauze tamponing through the meatus kept up until the gauze comes away unstained. He finds in from five to six weeks from the first operation in the majority of cases the cavity is soundly healed.

15. **Hypnotics.**—Tirard calls attention to the use of various hypnotics, even the mildest having their bad effects. His conviction is that, in the employment and selection of hypnotics, sleeplessness is the least important factor to be considered. The cause must be ascertained and the possibility of idiosyncrasy. The coexistence of other diseases must influence the selection of hypnotics. The risks of repeating moderate doses must be borne in mind. Generally the dose has to be gradually increased, but with some drugs like sulphonal, trional and tetronal, the danger appears to lie in the total quantity taken, though each dose may have been small. The greatest danger, however, is, when patients are given prescriptions for hypnotics, in the risk of setting up a drug habit. In this they are analogous to alcohol. He is in favor of any step that would tend to prevent their administration except under medical advice or under the physician's immediate directions. He would allow them to be dispensed only by a specially dated prescription, which would be retained by the druggist or returned to the prescriber, or would prohibit their sale to the public altogether.

16. **Puerperal Pyemia.**—Michels reports a case in which there was a postpartum fever, while the local condition of the pelvic organs was improved. There was a fulness indicating trouble in the left inguinal region, first attributed to fecal accumulation, but it remained unaltered in spite of thorough evacuation of the bowels. It increased and became slightly tender and the possibility of thrombosis of the ovarian veins was suggested. Later the patient had rigors and high temperature. Operation was performed, revealing a considerably thickened and dilated ovarian vein, which was ligated in two places, and the vein was then slit open and a fetid mass of softened thrombus was removed from its interior and small accumulations of pus evacuated. The effect was immediate. The patient rapidly improved and had an uninterrupted recovery. He says while one case is of very little value, it is suggestive and worthy of reporting in this instance.

The Practitioner, London.

April.

20 The Light-Treatment in Lupus and Other Diseases of the Skin. Malcolm Morris and S. Ernest Dore.
21 Undulant Fever. F. J. A. Dalton.
22 Adenoids: From the Practitioner's Point of View. P. L. Daniel.
23 The Differential Diagnosis Between Croupous and Catarrhal Pneumonia in Infants. S. Vere Pearson.
24 A Case of Acute Pancreatitis. Whewell Hogarth and B. G. A. Moynihan.
25 A Case of Severe Pneumococcic Infection (Acute Glossitis, Arthritis, Double Pneumonia and Double Empyema). Nathan Raw.
26 A Case with Comments (Primary Sarcoma of the Appendix). Peter Paterson.
27 A Review of Recent Work in the Field of Gynecology. John Phillips.
28 Some Recent Surgery of the Nervous System. Donald J. Armour.

29 Public Health. The Infectivity of the Later Stages of Scarlet Fever and Hospital Isolation. Louis C. Parkes.

Australasian Medical Gazette, Sydney.

March 20.

30 Ptomaine Poisoning. B. Burnett Ham.
31 Notes on the Clinical Aspects and Modern Treatment of Pulmonary Tuberculosis. A. Stewart.
32 The Blood in Pneumonia. Sydney Jamieson.
33 Puerperal Sepsis in Country Practice. C. H. Souter.
34 Surgical Gleanings. C. H. W. Hardy.

Revue de Chirurgie, Paris.

36 (XXIII, 3.) *Amputations ostéoplastiques fémoro-rotuliennes. J. A. Bussière.
37 Sur un cas d'onychogryphosis. M. Alexandre.
38 *De l'action combinée des opérations autoplastiques et des appareils prothétiques. Pour les restaurations de la face. Vallas and C. Martin. (Lyons).
39 Déformations congénitales des 4 membres. Lésions symétriques des mains et des pieds (of hands and feet). N. Magnanini.
40 Traitement chirurgical des salpingites. Etude historique et clinique. Acquaviva and Roux de Brignoles. (Commenced in No. 1.)

36. **Femoro-Patellar Osteoplastic Amputation.**—Bussière has modified somewhat Gritti's original technic to avoid retraction of the muscles and fixation of the patella in a bad position. He preserves the tendons and the tendon processes and also the tendons of the thigh inserted on the tibia. He also sutures the patellar ligament to the tendons or muscles of the posterior region of the thigh with a U suture. The tendon processes and remaining portions of the fibrous or aponeurosis tissues are sutured to fill up the spaces left in cutting the stump. Silver wire is also used to ensure the fixation of the patella to the femur, by two lateral sutures By this method of amputating the stump is strong and movable. One of his patients, operated on in 1899, can be hit a violent blow on the end of the stump without experiencing the slightest pain. The stump does not become emaciated, and there is no retraction of muscles or tendons. He illustrates the various steps of the intervention and the aspect of the stump.

38. **Combination of Autoplastic Operations and Prothesis for the Face.**—In the case described the conditions resulting from having part of the jaws and tongue shot away at close contact two years before were remedied, 1, by resection of the deformed stump of the lower jaw and appropriate prothesis, and 2, by correction of the functional troubles resulting from the adhesion of the stump of the tongue to the roof of the mouth. This was finally accomplished by progressive stretching of the cicatrix by heavy apparatus. 3. By correction of the prognathism of the upper jaw, accomplished by retropulsion of the median fragment after liberal unilateral osteotomy. A slanting strip of bone, 15 millimeters wide, comprising the two premolars, was resected. This liberated the median fragment and rendered retropulsion possible. a new procedure in such cases. The results of the three-fold intervention have been very satisfactory.

Revue de Medecine, Paris.

41 (XXIII. 1.) Kystes multiloculaires congénitaux des reins (of kidneys). *E. Boinet and A. Raybaud.*
42 *Le pancreas dans les cirrhoses veineuses du foie (of liver). Klippel and Lefas.
43 Sur le diagnose et la pathogenèse des myelites aigues. E. Mouratoff (Moscow).
44 Maladies associées. Fièvre typhoide et méningite tuberculeuse. Chavigny.
45 Cas de cancer primitif "juxta-hépatique" des canaux biliaires. P. Planteau and A. Cochez.
46 (No. 2.) *Les nerfs articulomoteurs des membres. J. Grasset.
47 Sur des rêves (dreams) précurseurs de la migraine ophthalmique. Ch. Féré.
48 *Quelques faits d'abcès juxta-laryngés. Deguy.
49 (No. 3.) *Du dédoublement (splitting) du second bruit du coeur (of heart) à précession aortique. P. Cuffer*and R. Bonneau.
50 *Etude clinique sur une antitoxine tuberculeuse. Resultats therapeutiques dans les tuberculoses externes. Guerder.
51 Les exutoires (issues) tuberculeux du poumon (lung). C. Sabaurin.
52 *Epilepsie cardiaque et phénomène de rappel (recalling). L. Rueff.

42. **Pancreas in Cirrhosis of Liver.**—Klippel is convinced that cirrhosis in the liver is merely one manifestation of an affection which in fact primarily involves, at the same time as the liver, the gastrointestinal glands, the spleen and the pancreas. In some of the eight cases that came to autopsy he found the pancreas even more profoundly affected than the liver, while in others both organs seemed to participate in equal degree in the morbid process.

46. **Articulomotor Nerves of the Limbs.**—Grasset reviews the three-fold action of these nerves on the muscles, contracting, stretching and holding them, and argues that they should be designated differently from the titles now in vogue. Instead of naming them by their topographic arrangement at the periphery they should be grouped into functional units with their cortical centers. We should not call them spinal and cranial nerves as all are cranial. The brain, the cerebellum and the spinal cord should not be studied separately, but, instead, we should speak of and study the ten great nervous apparatus of the body: 1, the nerve apparatus of thought; 2, the general sensory-motor nerve apparatus; 3, the nerve apparatus of orientation and equilibrium; 4, of language; 5 to 8, of the special senses; 9, of circulation, secretion and nutrition, and 10, of digestion and respiration.

48. **Juxtalaryngeal Abscesses.**—The larynx, like the epigastric region, the utero-ovarian and the perineoscrotal, is an important reflex-generating zone. Exploration and attempts to operate are liable to induce fatal syncope, especially in case of a juxtalaryngeal abscess. It may run a latent course, with no signs of tumefaction, redness or fluctuation. Dyspnea and stridor are no positive evidence of pus, as they may be due to the underlying laryngitis. If syncope occurs when the abscess is being explored or incised, no time should be lost, but tracheotomy should be done at once and artificial respiration commenced, as otherwise the reflex inhibitory action on the heart and respiration centers may prove rapidly fatal. Seven cases are reported.

49. **Splitting of the Second Sound of the Heart.**—Cuffer calls attention to the importance of the constant or transient breaking up into two sounds of the second heart sound, corresponding to the hypertension of the systemic circulation. He regards it as an early sign of the stage of infectious diseases just preceding the establishment of lesions.

50. **"Antitoxin" Treatment of Tuberculosis.**—Guerder reasons that beside the products of bacterial origin, which successfully induce immunity when subjects are vaccinated with them, there must be other substances, likewise derived from organic living cells, possessed of the same or similar properties. They probably will not prove so powerful as those of direct bacterial origin, but still sufficiently so to answer the purpose. He has been seeking for such a substance, and believes that he has found it in cod liver oil. This is the product of the living cells of the cod's liver, and he has established that when injected into the heart of an external tuberculous lesion it annuls the inhibiting effect previously exerted by the tubercle bacilli on phagocytosis. The general beneficial effect of these local injections of the active principles elaborated by the cod liver cells is most remarkable, he states. It is partially direct but mostly indirect and consecutive to its local action. Subcutaneous injection of cod liver oil in and around a fresh tuberculous lesion may induce it to heal without leaving a trace. In tuberculous affections of the joints it renders immobilization unnecessary, and it has cured many desperate cases in which the patient was in advanced cachexia. He reports 60 cases in which he has applied this "antitoxin" treatment, as he calls it. One patient succumbed to the results of amputation, another to diabetic gangrene, and one to albuminuria, a total of 4 deaths. As 18 are still under treatment, he can make a definite report of only 42 cases. Omitting the 2 deaths from complications, his record is now 40 cured in 42 cases. The affection was a non-suppurating osteitis in 8, coxalgia in 7, enlarged ganglia in 2, and anal or cutaneous tuberculosis in 2 each. Of the suppurating lesions there were 10 of osteitis and osteoarthritis, 4 of coxalgia and 5 of ganglionary lesions. He injected 1 or 2 gm. every fourth or fifth day in the immediate vicinity of the lesion or into the fistula. The fistulas are hardest to cure, and he has found it necessary sometimes to fill them with the oil every day, injecting it into the vicinity about once a week. In a suppurating lesion it usually induces the formation of an abscess which requires evacuation, after

which the healing proceeds rapidly. The mode of action of the injections is singularly like that of a natural, spontaneous healing process as observed in the healthy cells immediately surrounding the lesion.

52. **Phenomenon of Recall.**—Rueff remarks that a lesion of the nerve centers hitherto compensated or latent, with or without previous manifestations, may suddenly become manifest on the occasion of some disturbance in the local cellular nutrition. The manifestations that follow may be a minute reproduction of some previous clinical syndrome, or they may assume a form showing that they are merely the external realization of some idea or psychic image evolved during the first manifestation of the lesion, retained in the brain during the interim and, when realized, usually becoming the starting point for a new series of morbid phenomena. The communication issues from Bernheim's clinic at Nancy.

Berliner Klinische Wochenschrift.

53 (No. 9.) Die klin.-pathol. Bedeutung (importance) der Autolyse. F. Umber.
54 Ueber die Scopolamin-Morphium-Narkose. L. Wild (König's clinic).
55 Welche Rolle spielt der Sternalwinkel bei der Athmung (role of sternal angle in respiration)? D. Rothschild.
56 *Ueber einige Ursachen von Husten und Schnupfen (certain causes of coughs and coryza). G. Rosenfeld.
57 Gedanken (thoughts on) Neuron-Frage (question). H. Hamel. (Commenced in No. 8.)
58 (No. 10.) Kniegelenktuberculose (of knee). Abwartende Behandlung oder (expectant treatment or) Operation? König.
59 *Immunitat und Narkose. J. J. Snel.
60 *Zur Behauptung von der Quecksilber-Etiologie der Tabes. Ein statistischer Beitrag. P. Cohn.
61 Zur Frage der traumatischen Albuminurie. F. Engel (Cairo).
62 Ueber einen auf Herz- (heart) Bigeminie beruhenden Fall von doppeltem Herzstoss (double apex beat). K. Doll.
63 (No. 11.) *Tuberculosebekämpfung (campaign against tuberculosis). E. v. Behring.
64 Schwieriger Kropf- (goiter) Operation unter localer Anesthesie. Riedel (Jena).
65 *Ueber Carcinom und Diabetes. I. Boas.
66 Results of Training Deaf Mutes in Hearing Exercises. F. Treitel.—Ueber die Ergebnisse der Untersuchungen in der Taubstummen Anstalt zu Weissensee, etc.
67 Ueber ein Sklerom-Herd (focus) in Ost-Preussen. Gerber.
68 Zur Frage der traumatischen Albuminurie. H. Senator.

56. **Certain Causes of Coughs and Coryza.**—Instead of ascribing to "nervousness" certain coughs and colds of obscure origin, Rosenfeld thinks we could determine and remove the cause by seeking for it. In some cases he describes the conditions always coincided with the blossoming of plane trees, and in another with the care of a parrot. He gives a view of the feather dust from the parrot, under the microscope, which well shows its irritating character.

59. **Immunity and Narcosis.**—Snel undertook, at Talma's suggestion, to discover whether narcosis reduced the resisting power of guinea-pigs. He found that it does so, but only for the time being. Narcosis suspends immunity and annihilates or temporarily suspends the saving normal bactericidal powers. These findings explain post-operative pneumonia. The narcosis annuls for the time being the bactericidal properties of the normal lungs, and the bacteria in them are thus enabled to exert their pathogenic power. During an operation, also, bacteria are more liable to be inhaled than under ordinary circumstances As the mucosa is not sensitive, coughing is not induced which would expel the saliva, mucus, etc., flowing into the throat. The surgeon, therefore, should assume the responsibility of disinfecting the mouth and throat as scrupulously as the field of operation before undertaking any surgical intervention requiring narcosis. The air to be breathed during the operation should also be as germ-free as possible, especially in case of a tracheotomy. A contrivance to filter the air as it enters the tracheal canula might ward off threatening complications from this source.

60. **Mercury Not a Factor in Tabes.**—In 86 male patients with tabes at Mendel's polyclinic 61 had a history of venereal ulcers, but only 23 had received mercurial treatment of any kind. In 31 female patients only 5 had ever been treated with mercury. The syphilitic infection had been mild or even latent in all cases.

63. **The Campaign Against Tuberculosis.**—Behring asserts that he has not yet attempted on man any therapeutic measures along the line of his immunization of cattle, and thinks that probably a long time will elapse before he can proceed to anything of the kind. He found that a hypersusceptibility to intravenous injection of tubercle bacilli on the part of the cattle, always coincided with agglutinating properties in the blood. He believes that the same parallelism would be observed in case of tuberculin if it were injected into a vein, as described in the last two issues of The Journal, pp. 1083 and 1178. He thinks that there must be some causal relation between these three phenomena, the agglutinating power of the blood, the hypersensibility to intravenous injection of tubercle bacilli and the reaction to tuberculin. If this assumption be confirmed, then it corroborates Koch's idea that the agglutinating property is an index of the resisting powers of the organism, and would apply also to the susceptibility to tuberculin. It is important, however, Behring remarks, not to confound the diagnostic and prognostic significance of the tuberculin test. The prospect of immunizing human beings by feeding infants with milk from immunized cows is sustained by his experiences with young calves suckled by immunized cows. Recently, for instance, a sucking calf, 14 days old, was vaccinated by his method and no appreciable reaction followed. Other facts that sustain his views are: 1, that several of the immunized cattle kept in infected herds for a year and a half after they had been vaccinated showed no signs of tuberculosis when slaughtered; 2, large numbers of immunized cattle have been slaughtered on stock farms and none has shown signs of tuberculosis; 3, tuberculin tests of 3 immunized cattle one year after vaccination resulted negatively when all the other cattle in the herd reacted positively, and 4, his experiences have been brilliantly corroborated by the results of Thomassen's successful experiments at Utrecht. Behring, in conclusion, qualifies all that has been hitherto accomplished in the campaign against tuberculosis, the sanatoriums, etc., as merely palliative, minor measures, no matter on how extensive a scale they may be organized, even Germany's 57 sanatoriums in active operation, with 27 on the verge of completion, and 4 seaside convalescent homes. The sanatorium movement has accomplished much good, but he proclaims that still more would be realized by isolation of the incurables. The world owes the rarity of leprosy at the present day to the policy of isolating the lepers enforced during the Middle Ages. Model dwelling houses and the strictest hygiene will not prevent tuberculosis infection so long as persons with "open" tuberculosis are housed under the same roof—or, at least, this has been his experience with cattle. Adults are not so much exposed to infection, but newborn infants are so exposed and unprotected that he does not believe it is possible for an infant to avoid infection if kept in a room with a coughing consumptive. He is confident that the young are born free from tuberculosis, but acquire it from tuberculous parents, grandparents or others. He has found that three months may elapse after a calf has been infected before it reacts to tuberculin, while years may pass before clinical manifestations become evident, if they ever do. He has noticed that circumstances depressing the vitality of the cattle were always necessary for the transformation of an animal, merely shown to be infected by the tuberculin test, into a phthisical animal. Cornet, fourteen years ago, demonstrated that the mucous membrane might allow the passage of tubercle bacilli without a local lesion. In harmony with this fact is Behring's experience that in young cattle tuberculosis infection is almost without exception localized in the abdomen, but not in the intestines; it is rather a primary tuberculosis of the glands. He announces that his laboratory research on the immunization of cattle is now at an end, as he has accomplished what he sought. The results have been so invariably successful with animals that he asks: "Shall we not do as much for our children?"

65. **Carcinoma and Diabetes.**—Boas states that there are 6 cases on record in which the patient died in diabetic coma soon after an operation for the removal of a cancer, although for several months or years previously he had been entirely free from sugar. Israel has published 5 cases of carcinoma of the breast in diabetics successfully operated on. In Boas' experi-

ence he has encountered 7 diabetics in 55 patients with carcinoma of the rectum; 2 diabetics with carcinoma of esophagus, and 2 with gastric carcinoma, and 1 of the liver and omentum. All were men. This is a total of 12 cases of carcinoma in diabetics in his total of 366 cases of intestinal carcinoma. In one case an easily operable carcinoma of the rectum in a diabetic, with some sugar and acetone, was extirpated and the patient died in coma three days later. A latent diabetes, he finds, may remain latent after an operation or it may flare up into a fatal coma.

Klinisch-Therapeutische Wochenschrift, Vienna.

69 (IX, 45.) Ueber unschädliche Haarfärbemittel (harmless hair dyes). P. Richter.
70 *Zur Pathologie und Therapie der Influenza. W. Stekel. (Commenced in No. 44.)
71 Nasendouche. A. Thost.
72 (Nos. 46-7.) Ueber Anaemien. H. Senator. Clinical lecture.
73 Combination von Krebs und Tuberkulose im Uterus. H. Szasz.
74 *Advantages of Open Treatment of Obstinate Leg Eczema. S. Behrmann.—Ueber Beinleiden überhaupt und über die Vorteile der zeitweiligen offenen Behandlung hartnäckiger Unterschenkeleczeme.
75 Ueber den Juckausschlag im Kindesalter (strophulus). J. Zappert.
76 (No. 48.) Ueber Pyurie. E. Neusser. Clinical lecture.
77 Ueber die Ausräumung der Nase vom Munde (evacuation of nose through the mouth) her und Freilegung der (exposure of) Basis cranii über der Nase. L. Löwe.
78 *Die intravenose Therapie. V. Patella. (Commenced in No. 46.)
79 Indikationen zu chir. Eingriffen bei Hirnaffectionen (intervention in brain affections). H. Schlesinger.
80 (No. 49.) Ueber die Verwendung der Casuistik in der Urologie. G. Berg.
81 *Kann das Diphtherieserum auch auf andere Krankheiten günstig einwirken? D. Hirsch.
82 Ueber die rectale Untersuchung (examination) in der Gynaekologie. I. Neumann. Clinical lecture.
83 (No. 50.) Iron Splinter in Vitreous for Eight Years. A. Vossius.—Schicksal eines Eisensplitters welcher 8 Jahre im Glaskörper eines 44 jährigen Patienten gesteckt hatte. Clinical lecture.
84 Myxoedem und sporadischer Kretinismus. J. v. Wagner-Jauregg.

70. **Influenza.**—Stekel is convinced that quinin has an almost specific action in influenza, and has known two doses of a gram each of quinin sulphate completely abort an established attack in the first hours. He usually gives .5 gm. of quinin hydrochlorate or sulphate, repeated in half an hour and once more after the same interval, three doses in all. For children under 6 he gives the quinin tan., as many decigrams as the child is years old, two doses. If he does not see the patient until the second or third day, he refrains entirely from quinin medication, as it is seldom effective at this stage. When there is violent frontal sinus headache he gives a combination of .01 gm. morphin hydrochlorate and .5 gm. each of antipyrin and sodium salicylate. Patients must stay in bed until the heart and pulse are normal. in case of influenza. In some instances the influenza assumes a latent or abortive form, but with marked depression, suggesting neurasthenia. One of his patients, after a five-day attack of influenza, was tormented by ideas of suicide for eight weeks, with no cause except the preceding influenza. In these cases the influenza toxins must be eliminated as completely as possible. The influenza bacillus aggravates the action of measles and scarlet fever, but, on the other hand, seems to be antagonistic to certain other infections, possibly the diphtheria bacillus. In one case a patient with gonorrheal cystitis found himself cured after an intercurrent attack of influenza. He suggests that possibly the lesser mortality from diphtheria in late years may be due to the influence of la grippe.

74. **Eczema of the Leg.**—Behrmann advocates open treatment of eczema of the leg with removal of the cause, which may be excessive walking or standing. genu valgum or pes varus, as indirect causes, and hyperidrosis, dilatation of the veins and trauma as the direct. He describes a case in detail to demonstrate the benefits to be derived from staying in bed and refraining from dressings of any kind, merely applying a salve from time to time, zinc at first and later tar. The eczema rapidly healed under this open treatment, and to prevent recurrence the patient wore a tricot stocking leg thereafter. The tricot supplied an imitation of the natural tonus of the parts and kept the pathologic tendency under control. It was left off at night. Behrmann has been very successful with this mode of treatment. He calls attention to the frequency of eczema in persons exposed to tuberculosis.

78. **Intravenous Therapy.**—Patella's article reviews the history and experiences to date of this method of therapeutics, which the Italians have most exploited. Remarkably favorable results have been obtained in threatening general anthrax infection from intravenous injections of sublimate. Corseri saved a woman of 50 stated to be already in extremis; 12 and 10 mg. of sublimate were injected in this case. Experimental intravenous injection of sublimate does not protect against anthrax infection, and intravenous injection of carbolic acid in tetanus, which has been effective in the clinic, is likewise powerless in the laboratory. This is possibly owing to the fact that experimental tetanus is always stormy and rapid, never subacute and gradual, as in the clinical cases benefited by the injections. Colloid silver is most effective in intravenous injection. Patella has tried Landerer's cinnamic acid treatment of tuberculosis by the intravenous route, but derived no benefit from it although his experience confirmed its absolute harmlessness. This was also established in regard to sodium cacodylate and the iodo-iodid solution. Spolverini has obtained wonderful results from the latter in numerous cases of tuberculosis in children, severe rheumatism and tertiary lues, without any local drawbacks. Patella has successfully injected diphtheria serum by way of the veins and also Sclavo's serum in a severe case of anthrax bacteriemia. Kramitzki has reported that intravenous injection of a filtered and diluted warm emulsion of rabies toxin is not only harmless but rapidly renders the animals immune. Silvestri has recently proclaimed that intravenous injection of calcium chlorid is among the most powerful hemostatic measures known. Patella's experience with intravenous injection of iron has not been favorable. In his tests of intravenous injections of sublimate on healthy persons he noted a considerable leucocytosis which lasted for thirty-six hours, thus mobilizing the elements most effective for the struggle with an invading affection. The intravenous sublimate injections were first used for syphilis, and recent writers have reported excellent effects from them in syphilis of the eyes. Renault has cured cases of lues of the central nervous system with the cyanid, which he has also found effective in tabic crises. Tommasoli's success in aborting syphilis by intravenous mercurial injections has been described in these columns. Patella has applied the sublimate injections in 9 cases of articular rheumatism. In one very severe case, rebellious to sodium salicylate, 2 mg. were injected the first day and 2 mg. morning and evening on the four following days. All the severe general and local symptoms entirely vanished after the third injection. The injected vein was indurated after the second injection, but this soon passed away. In 4 other cases, one also rebellious to the salicylate, the results were equally striking. Each injection was followed by a profuse sweat. In another case a man of 32 had a very painful, recurring articular rheumatism. The leucocytes increased from 9,000 to 12,200 after the first injection and general improvement was apparent. The patient refused further injections and returned to the salicylate with recurrence of the symptoms. He allowed later an intravenous injection of 3 mg. of sublimate and improved so rapidly that he could get up in three days. Patella believes that the success of intravenous injection of sublimate depends on the leucocytosis induced. If this is not produced by the first injection, little benefit may be anticipated from continuing in such cases. The intravenous route should not be chosen for general use, but in urgent cases it may prove an invaluable resource, especially in those rebellious to medication by other methods Intravenous injections are painless. If thrombi develop they are certainly due to defective technic.

81. **Is Diphtheria Serum Effective in Other Diseases?**—Hirsch has derived great benefit from it in cases of eczema, enlarged glands and prurigo, as he describes in detail.

Muenchener Med. Wochenschrift, Munich.

85 (No. 12.) Beitrag zur traumatischen, nicht komplizierten Luxation der Extensoren-Sehnen (tendons) der Finger. A. Becker.

86 *Die Kolpeuryse bei Incarceratio uteri gravidi retroflexi. W. Albert.
87 Is the Addition of Sodium Sulphate to Meats an Adulteration? A. Kraus and H. Schmidt.—Kann in dem Zusatz von schwefligsaurem Natrium zu gehacktem Rindfleisch eine Fälschung erblickt werden? Reply most decidedly in the affirmative.
88 Fall von Nephritis parenchymatosa syphilitica. F. Mühlig.
89 Beitrag zur Cystennieren- (cystic kidney) Exstirpation. O. Seitz.
90 Kurzsichtigkeit (myopia) durch Diabetes mellitus. S. Neuburger. (2 cases.)
91 Zur Behandlung der Perforationen und Zerreissungen der Gallenblase (lacerations of gall bladder). Enderlen. Autoprothesis with Omentum.
92 Geschichtliche Bemerkungen zur Methode des überlebenden Warmblüterherzens (surviving heart of warm-blooded animals). O. Langendorff. Claim for priority.
93 *Ueber die Influenza. W. Ebstein (Gottingen). (Commenced in No. 11.)
94 *Die operative Behandlung des Gebärmutterkrebses (carcinoma uteri). G. Klein.
95 Postgraduatehochschule in New York. C. Beck.
96 (No. 13.) *Zur operativen Behandlung akuter Larynx-Stenosen. Trumpp.
97 Ueber die diuretische Wirkung des Theocins. H. Kramer.
98 *Ein Beitrag zur Frage der Blutregeneration. Schmidt.
99 *Blutuntersuchung (examination of blood) bei Hydatiden-Cysten; lokale und allgemeine Eosinophilie. J. Sabrazes.
100 *Die direkte Perkussion des Epigastrium, ein diagnostisches Hilfsmittel bei Ulcus ventriculi. F. Mendel.
101 Ueber die Bedeutung (importance) der Roentgen-Untersuchung für die praktische Chirurgie. F. Fraenkel.
102 *Bedeutung der nasalen Athmung (breathing) in ihrer Schutz- und Heilwirkung (protection and cure) auf Krankheiten (in disease). G. Trautmann.
103 Ueber isolierten klonischen Krampf des weichen Gaumens (soft palate). L. Roemheld.
104 Fall von Gonokokkenpneumonie. Bressel.
105 Die Gefahr (danger) der Infektion mit Ankylostoma duodenale im Grubenbetrieb. Tenholt.
106 Hans Buchner's Antheil (share) in der Entwickelung (evolution) der Bacteriologie. Gruber.

86. **Colpeurysis for Incarcerated Gravid Uterus.**—Albert expatiates on the great value of the colpeurynter in case of a retroflexed gravid uterus. He uses it exclusively and has always cured the condition without the slightest trouble. The uterus is gently lifted, as on a cushion, without injury to it or to its contents. In one of his 5 cases the uterus had been incarcerated for three weeks, but was replaced in normal position in two hours by the colpeurynter. If the pregnancy has not passed the fourth month he usually inserts a pessary. After this stage it is not necessary. Lying on the side or abdomen and frequently emptying the bladder will prevent recurrence. He urges the importance of catheterization of the bladder as a routine diagnostic measure in all cases suggesting this condition.

93. **Influenza Prophylaxis.**—Ebstein insists on the necessity of scrupulous cleanliness to prevent infection of others in case of influenza. The "walking" cases are much more dangerous in this respect than the severe ones in which the subjects stay in bed under proper care. The same prophylactic measures as for tuberculosis should be applied to the sputa. He prefers tonics in treatment, with quinin, although he does not think there is any specific for it. Persons should not visit friends with influenza. The article is a comprehensive historical and bacteriologic study.

94. **Operative Treatment of Uterine Carcinoma.**—Klein reviews the statistics that have been published to date and deplores that even the best show that only 13.4 per cent. of the patients are permanently cured. The remedy lies in earlier diagnosis. He proclaims that it were better to curette 100 women unnecessarily than allow one woman to succumb to cancer from neglect of curetting. He hails the woman physician as the solution of part of the problem, as he thinks women will allow examination by another woman more promptly than by a man, and not postpone it until too late. He urges stricter regulations against charlatans so that time will not be wasted on them. If women consult the physician earlier, and if they are carefully examined, if necessary with exploratory incision and curette, there is no doubt that the proportion of permanent cures will be much increased.

96. **Treatment of Laryngeal Stenosis.**—Trumpp illustrates the elastic tubes he uses for intubation. They are made as if with a deep spiral screw thread, which imparts great elasticity.

98. **Regeneration of the Blood.**—Schmidt proclaims that basophile granulations and polychromatophilia usually appear during convalescence from anemia, at a time when the general health is improving. This is true not only of toxic but also of traumatic anemia, due to loss of blood. The results of experiments with rabbits also all point to the same thing, namely, that the basophile granules are derived from nuclei and are thus a sign of regeneration of the blood, and that polychromasia of the red corpuscles results from the mixing of the dissolved substance of the nuclei with the hemoglobin, whether this dissolving occurs directly in the nuclei or a stage of basophilous granulation intervenes. Both the basophile granulated and the polychromatic reds are young forms of blood corpuscles and are thus a sign of regeneration of the blood. In a case he had occasion recently to examine, the blood was normal on the day of a severe accident entailing profuse loss of blood to absolute pulselessness. On the sixth day afterward polychromatic and basophile granulated red corpuscles were numerous and remained so for three weeks. An increase in the hemoglobin of 50 to 75 per cent. paralleled these signs of regeneration.

99. **Eosinophilia with Hydatid Cysts.**—Sabrazès investigated the blood of 7 patients with hydatid cysts and found that the echinococci have a remarkable positive chemotactic attraction for the eosinophiles. In one case the eosinophiles had penetrated into the cyst, and also surrounded it with a concentric layer nearly 1 cm. thick. The almost exclusive presence of eosinophiles in the cyst fluid suggested the diagnosis, confirmed by the operation. The leucocytosis was 11,160 and 15,500 in the cases of large cysts in the liver, and was 17,360 with multiple cysts in the abdomen. The eosinophiles were prominent in every case, and usually nine or ten times the physiologic average. If the membrane of the cyst is partially degenerated the eosinophiles penetrate into the cyst and, associated with Charcot-Leyden crystals, serve to differentiate the lesion.

100. **Differentiation of Gastric Ulcer by Percussion.**—Mendel states that lightly tapping the epigastrium with the percussion hammer is not painful to anyone under normal conditions, but in case of an ulcer, a certain region, usually circular in outline, is found to be extremely painful when tapped. It is surprising how rapidly this circular sensitive area diminishes in size when proper treatment is instituted. As this can not be due to the healing of the ulcer in so brief a time, it is probably to be explained by the subsidence of the surrounding zone of inflammation as the stomach is rested. It is possible by this percussion not only to differentiate a gastric ulcer wherever located, but also to supervise its healing and be able to tell with precision when the last trace of it has disappeared. The same measure and deductions apply in the same way to ulcer in the duodenum. In every case of duodenal ulcer a sharply circumscribed painful area will be found by this percussion on the right, close to the linea alba, somewhat below the center of a line from the costal arch to the umbilicus. It is generally about the size of a half dollar, and like the similar area in case of gastric ulcer, gradually shrinks in size and finally disappears under appropriate treatment. Other lesions in the abdomen and epigastrium will be accompanied by an area of pain on percussion, but none of the others shows such a sharply circumscribed sensitive area as ulcers in the stomach and duodenum. The percussion never caused the slightest harm, but in case of a recent hemorrhage caution would be advisable. The area of pain does not necessarily locate the ulcer, but it always occurs at the same place.

102. **Importance of Nose Breathing.**—Trautmann reports a case in which the operative restoration of nose breathing was followed by the spontaneous cure of severe and previously intractable throat lesions. He warns against curetting and other destructive measures on the nasal passages, as they deprive the nose of its natural protective properties and render it as defenseless as the passages below.

Lo Sperimentale, Archivio di Biologia norm. e patol., Florence.

107 (LVII, 1.) Sulla tossicità del sangue (toxicity of blood) nell' ipertermia sperimentale. E. Ravenna and P. Minassian.
108 Sul contenuti lecitinico del fegato, dei reni e del cuore (lecithin in liver, kidneys and heart) nella degenerazione adiposa sperimentale. G. Lusena.
109 Contributo alle lesioni prodotte dal fungo raggiato (actinomycosis). V. Remedi.
110 *Ricerche sperimentali sulla peristaltica intestinale. I. Simon.

110 **Intestinal Peristalsis.**—From a series of experimental investigations, the methods of which are described, and from a general discussion of the literature, Simon reaches the following conclusions: 1. In the small intestine the direction of the movement is always peristaltic. There is no antiperistalsis. 2. The movement of peristalsis in the small intestine is more rapid in the upper portion than in the inferior, both in physiologic and pathologic conditions, and is slowest in the large intestine. 3. The velocity of movement varies according to the nature of the food. 4. The introduction of food into the stomach and stimulation of the rectum and small intestine are conditions that cause the phenomena of inhibition of intestinal peristalsis.

Cronica Med. Mexicana, Mexico.

111 (V, 6.) Etiologia de la escoliosis. C. Tejeda.—Accepts static, trophic and nervous factors in etiology.
112 Algunas consideraciones sobre la enfermedad de Addison, sugeridas por la observacion de 6 casos de tuberculosis de las capsulas supra-renales. F. Ocaranza.
113 (No. 7.) El tifo del ganado bovino (study of cattle diseases in Mexico). M. G. Aragon.
114 *(Nos. 8-9.) Algunos apuntes sobre (notes on) quinimetria.* E. G. Puente.
115 (No. 10.) Notes on Yellow Fever at Orizaba. M. P. Colmenares.—Apuntes para el estudio del vomito en Orizaba.
116 *Consideraciones diagnosticas y operatorias acerca de la hernia *diafragmatica. F. Hurtado.*
117 La reaccion febril y su tratamiento. E. P. Lamicq.
118 Fiebres palustres. Tratamiento dosimetrico y pambotano (calliandra grandiflora). E. L. Abogado. (See 121 below.)
119 Vomiting in Pregnancy. Ibid.—Los vomitos del *embarazo* y su tratamiento.
120 (No. 11.) Dispnea y dolor costal. E. L. Abogado.
121 El tlacoxiloxochitl (calliandra grandiflora). E. L. Abogado. (See 118 above.)
122 *Study of Deformed Pelves in Mexico. J. Duque de Estrada.—Estrechamientos pelvicos.
123 (No. 12.) Una forma frustanea de enfermedad de Basedow. F. Ocaranza.
124 La antisepsia de las vias urinarias por la medicacion interna. E. L. Abogado.
125 (VI, 1.) *Caso de tetanos traumatico curado por la pilocarpina. D. Garcia.
126 (No. 2.) La aplicacion de los rayos X al estudio de la angeiologia. S. Garcia.
127 La gota y su tratamiento dosimetrico. E. L. Abogado.
128 La inflamacion considerada desde el punto de vista de la *resistencia organica. L. S. Viramontes. (Commenced in* No. 1.)
129 Afecciones meningeas agudas, 2 curaciones. E. L. Abogado.

116. **Hernia of the Diaphragm.**—Hurtado's patient was a woman of 50, five months pregnant, who exhibited symptoms of acute intestinal occlusion, suggesting internal hernia. There was no fecal vomiting and the conditions were masked by preceding administration of vigorous purgatives which had failed to purge. An artificial anus was made in the cecum, which relieved the conditions, but nothing was found to explain the occlusion. Abortion followed the next day. The opening into the abdomen had been small, as the surgeon feared the effects of a laparotomy. The patient was free from symptoms after the abortion, except that an attempt to give an anesthetic, in order to explore conditions further, caused dyspnea and was abandoned. Intense pain suddenly developed in the epigastrium and left hypochondriac region, and the patient died in a few hours. The autopsy revealed traces of old pleurisy of the diaphragm, with adhesions and a perforation resulting from an old ulceration Through this hole nearly 60 cm. of the intestine, including the transverse colon, had irrupted into the thorax. Four years before she had complained of occasional attacks of dyspnea, which had gradually become less intense and less numerous, but still recurred every one to three weeks. She was unable to sleep on the left side, as this position caused dyspnea and she had also complained since this time of a constant pain in the left side at the seventh and eighth ribs, on the axillary line. Pain from this point radiated through the left lung. This pain was always most marked in the afternoon, after eating heartily or after an emotion. The present illness commenced with an exacerbation of this pain and constipation, with occasional vomiting, not fecal. No pain in abdomen. A blister was applied to the spot and vigorous purgatives given, but without benefit. Two other cases of hernia of the diaphragm are described, both traumatic, and, in conclusion, E. Fletcher Ingals' article on the subject in THE JOURNAL, xxxvi, p. 1770, is reproduced in full in Spanish.

122. **Deformed Pelves in Mexico.**—Duque de Estrada is chief of the maternity at Mexico, and reviews his extensive experience in this monograph, which is continued as an illustrated supplement throughout the year. He does not find the general type of pelvis different from that of Europe. When a pelvis is deformed it is usually the result of imperfect development, and this condition is frequent. He has never seen elsewhere, however, a contracted pelvis, such as some of the specimens he illustrates, in which the transverse diameters were unusually short but only in the lower part of the excavation. He suggests the term "infundibuliform" for this variety. He also notes that he has never found traces of rachitis in the pelves he has examined, and, in fact, he remarks, there are no clinical records of the existence of this affection in Mexico. He ascribes the deformities observed to defective development from the lack of hygiene, the sedentary and confined life of some, hard work of others, early marriages before the skeleton is formed, and certain occupations, such as making tortillas, washing, etc., followed from girlhood. The pelvis was contracted at the inlet in .58 per cent., but a contracted outlet was much more frequent.

125. **Pilocarpin in Traumatic Tetanus.**—Garcia attributes the recovery of a patient in a case of severe strychnin intoxication to his administration of pilocarpin. The symptoms were alleviated at once after the sweating and salivation induced by it. He has applied the same treatment recently in a case of intense traumatic tetanus, injecting 2 cg. of pilocarpin and administering the same amount by the mouth, supplemented by 1 gm. of sulphonal at night This was continued intermittently, the symptoms diminishing gradually and always showing a slight marked improvement after each dose of the pilocarpin, which was generally given morning and evening at first. By the thirty-third day the movements were quite normal.

Gazeta Medica Da Bahia, Brazil.

130 (XXXIV, 2-3.) Os novos processos de cura radical das hernias inguinaes. J. Martins.
131 Evolution of Medical Education. D. Ramos.—Desenvolvimento do ensino medico.
132 Ibid. A. Britto.
133 (No. 4.) Servico Medico-legal de Antopsias. A. Peixoto.
134 (No. 5.) Das vegetaciones adenoides, seu valor clinico e da necessidade de uma intervençao radical. R. de Azevedo.

Revista de Med. y Cirugia, Havana.

135 (VIII, 1.) Caso de sarcoma del tejido (tissue) celular pelviano ocupando el espacio retro-peritoneal del fondo de saco de Douglas. L. Ortega.
136 *Intoxicacion alimenticia. G. M. de la Torre.
137 (No. 2.) *Diplococcus flogogenus pleuro-pulmonaris.* L. Placencia.
138 (No. 3.) *Fiebre paratifoidea. A. Agramonte.
139 (No. 4.) Ataxia cerebelosa experimental. R. P Vento.
140 (No. 5.) La tecnica de la nefropexia, con referencia especial de un metodo para fijar el rinon en su posicion normal. R. Guitèras (New York). (See p. 1166.)

136. **Food Intoxication.**—Torre has been investigating the cause of a febrile indigestion noticed in children after eating certain kinds of sweets, and thinks that it is due to the toxic action of stale eggs.

138. **Paratyphoid Fever.**—Agramonte reports that paratyphoid fever occurs in Cuba and that the clinical picture is identical with that of typhoid fever except for the absence of sero-reaction and the results of cultures. Typhoid fever, therefore, he remarks, is not a specific entity, as other bacilli besides Eberth's are able to produce it. In the case he describes in detail he is inclined to admit a double infection, true typhoid with the paratyphoid. The first two weeks the symptoms were those of ordinary typhoid, but from the seventeenth to the twenty-fourth day there was marked intermittency in the temperature, with a difference of several degrees between the morning and evening. Repeated examination of the blood for malaria was always negative and there were no signs of endocarditis. The sero-reaction was very faint, but agglutination with Gaertner's bacillus was pronounced, and one of the two paratyphoid bacilli isolated from the feces resembled this bacillus. He reviews the history of paratyphoid, and notes that the intermittent character of the temperature after the twelfth or fifteenth day was noted in nearly all the 46 cases on record.

New Patents.

Patents of interest to physicians, March 31 and April 7:

724382. Tubular metal crutch. Joshua Conn, Dunkirk, N. Y.

723847. Lifter and conveyer for invalids. Priscilla W. Dohoney, Columbia, Ky.

724289. Hot water bag. John H. Holt, Washington, D. C.

724186. Electric apparatus for therapeutic work. Howard Jackson, Newton, Mass.

724014. Truss. Manuel E. Jasper, Wiarton, Ont., Can.

724034. Hemostatic forceps. Wm. L. Nuttall, Newcastle, Ky.

724125. Combined cabinet and examining or operating table. Gilbert H. Prindle, Washington, D. C.

724046. Instrument for intubation of the larynx. Frank E. Sampson, Creston, Iowa.

723929. Aural instrument. Richard M. Sahffer, Baltimore.

724215. Photochemical and electrotherapeutic apparatus. Albert E. Sterne, Indianapolis.

724808. Surgical truss. Blanchard Chamberlain, Bellefontaine, Ohio.

724812. Device for correcting facial defects. Anna C. Cloud.

724680. Inhaler. Alonzo Dow, Wooster, Ohio.

724889. Hernial forceps. John H. Kochenderfer, Galion, Ohio.

724913. Syringe nozzle. John T. Montgomery, Charleston, Ill.

724500. Truss. Alfred A. Raymond, Chicago.

724522. Vaccinating needle. Onesime Thomas, Paris.

724643. Hypodermic syringe case. Benjamin T. Winchester, Baltimore.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

UTERINE AND TUBAL GESTATION. A Study of the Embedding and Development of the Human Ovum, the Early Growth of the Embryo, and the Development of the Syncytium and Placental Gland. By Samuel Wyllis Bandler, M.D., *Instructor in Gynecology, New York* Post-Graduate Medical School. Illustrated by 93 Drawings. Cloth. Pp. 159. Price, $1.50 net. New York: Wm. Wood & Co. 1903.

U. S. DEPARTMENT OF AGRICULTURE, Bureau of Animal Industry—Bulletin No. 44. Infectiveness of Milk of Cows Which Have Reacted to the Tuberculin Test. By John R. Mohler, A.M., V.M.D., Chief of Pathological Division, Bureau of Animal Industry. Paper. Pp. 93. Washington: Government Printing Office. 1903.

MUCO-MEMBRANOUS ENTERO-COLITIS. Symptoms, Complications, Etiology and Treatment. By Maurice De Langenhagen, M.D., Consulting Physician at Polombieres, Vosges, France. Cloth. Pp. 115. Price, $1.25. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

REPORT OF THE GOVERNMENT LABORATORIES OF THE PHILIPPINE ISLANDS for the Year Ended Aug. 31, 1902. (From the Report of the Philippine Commission.) Bureau of Insular Affairs, War Department. Paper. Pp. 582.

HOW TO BE SUCCESSFUL AS A PHYSICIAN. Heart-to-Heart Talks of a Successful Physician and His Brother Practitioners. Cloth. Pp. 123. Price, $0.50. Meriden, Conn.: The Church Publishing Co. 1902.

TWELFTH REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF MAINE for the Two Years Ending Dec. 31, 1901. Cloth. Pp. 300. Augusta: Kennebec Journal Print. 1902.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. Thirty-fourth Annual Session, 1902. Cloth. Pp. 361. Lincoln: Western Medical Review Publishing Co.

The Public Service.

Navy Changes.

Changes in the Medical Corps of the Navy, week ending April 18:

Surgeon H. N. T. Harris, detached from the *Monocacy* and ordered to the *Glacier*, at Manila, P. I.

Surgeon N. H. Drake, detached from the *Solace* and ordered to the *New York*, as fleet surgeon of the Pacific Station.

Surgeon A. C. H. Russell, detached from the Naval Museum of Hygiene and Medical School, and ordered to the *Newark*, as fleet surgeon, South Atlantic Station..

Surgeon F. J. B. Cordeiro, detached from the Naval Training Station, Newport, R. I., and ordered to the *Solace*.

Surgeon G. H. Barber, detached from the *Monongahela* and ordered to the Training Station, Newport, R. I.

P. A. Surgeon C. D. Langhorne, detached from the Naval Hospital, Port Royal, S. C., and ordered to the *Monongahela*.

Marine-Hospital Changes.

Official list of the changes of station and Duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 16, 1903:

Assistant Surgeon-General L. L. Williams, granted leave of absence for eight days from April 11.

Surgeon Irwin Fairfax, to proceed to Washington, D. C., for special temporary duty.

Asst.-Surgeon H. C. Russell, relieved from temporary duty at the Immigration Depot, and directed to rejoin his station at Stapleton, N. Y.

Asst.-Surgeon W. C. Billings, to proceed to Quebec, Can., for duty in the office of the U. S. Commissioner of Immigration.

Asst.-Surgeon B. S. Warren, granted leave of absence for, five days from April 16.

Asst.-Surgeon A. D. Foster, to proceed to Southport, N. C., and assume temporary command of the station at that port during absence on leave of Asst.-Surgeon B. S. Warren.

A. A. Surgeon John Devereux, granted leave of absence for twenty-three days from April 2.

A. A. Surgeon A. P. McConnell, granted leave of absence for three days from April 20.

A. A. Surgeon E. F. McConnell, granted leave of absence, on account of sickness, for 30 days.

A. A. Surgeon A. W. Slaughter, granted leave of absence for six days from May 5.

A. A. Surgeon R. T. Walker, granted leave of absence for thirty days from April 8.

BOARD CONVENED.

Board convened at Washington, D. C., April 15, 1903, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General H. D. Geddings, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 18, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, April 4-11, 2 cases.

California: San Francisco, March 29-April 5, 10 cases.

Colorado: Denver, March 28-April 4, 27 cases.

Florida: April 4-11, DeSoto County, 28 cases; Duval County, Jacksonville included, 6 cases.

Georgia: Atlanta, March 4-April 15, 30 cases; Lumpkin, April 7, 6 cases.

Illinois: Belleville, April 4-11, 1 case; Chicago, March 28-April 11, 37 cases, 3 deaths; Galesburg, April 4-11, 2 cases.

Indiana: April 4-11, Evansville, 2 cases; Indianapolis, 4 cases.

Kansas: Wichita: April 4-11, 3 cases.

Louisiana: New Orleans, April 4-11, 5 cases (2 imported), 2 deaths.

Maine: Biddeford, April 4-11, 1 case.

Maryland: Baltimore, April 4-11, 1 death.

Massachusetts: April 4-11, Fall River, 1 case; Lowell, 3 cases; Northampton, 1 case.

Michigan: April 4-11, Ann Arbor, 1 case; Detroit, 7 cases; Grand Rapids, 4 cases; Port Huron, 1 case.

Mississippi: Natches, April 4-11, 1 case.

Missouri: April 5-12, Kansas City, 2 cases; St. Louis, 5 cases.

Nebraska: Omaha, April 4-11, 2 cases.

New Hampshire: April 4-11, Manchester, 7 cases; Nashua, 5 cases.

New Jersey: Newark April 4-11, 1 case.

New York: Binghamton, March 28-April 4, 1 case, imported; Buffalo, April 4-11, 2 cases; Rochester, March 31-April 14, 16 cases, 1 death.

Ohio: Dayton, April 4-11, 3 cases

Pennsylvania: Altoona, March 28-April 11, 5 cases; Butler, April 4-11, 1 case; Carbondale, March 31-April 7, 1 case; Johnstown, April 4-11, 1 case; Philadelphia, March 28-April 11, 43 cases, 7 deaths; Pittsburg, April 4-11, 29 cases (2 imported), 3 deaths; Williamsport, April 4-11, 1 case.

Tennessee: Memphis, March 28-April 11, 13 cases; Nashville, March 28-April 4, 2 cases.

Utah: Salt Lake City, March 28-April 11, 17 cases.

Wisconsin: Milwaukee, March 28-April 11, 3 cases.

SMALLPOX—FOREIGN.

Austria: Prague, March 14-28, 13 cases.

Belgium: Antwerp, March 14-21, 2 cases, 1 death; Brussels, March 14-28, 6 deaths.

Brazil: Rio de Janeiro, March 6-13, 5 deaths.

Canary Islands: Las Palmas, March 7-21, 44 cases.

Colombia: Barranquilla, March 15-22, 2 deaths.

France: Roubaix, March 1-31, 1 death.

Great Britain: Dublin, March 14-28, 33 cases, 1 death; Hebburn-on-Tyne, March 14-21, 1 case; Leeds, March 14-28, 26 cases; Liverpool, to March 28, 68 cases, 7 deaths; London, March 21-28, 5 cases; Manchester, March 21-28, 18 cases, 1 death; Newcastle-on-Tyne, March 14-21, 2 cases; Nottingham, March 7-28, 11 cases; Sheffield, March 7-21, 4 cases; Walker-on-Tyne, March 14-21, 2 cases; Wallsend-on-Tyne, March 14-21, 2 cases.

India: Bombay, March 3-17, 157 deaths; Calcutta, Feb. 28-March 14, 1 death; Madras, Feb. 28-March 6, 1 death.

Mexico: City of Mexico, March 22-29, 7 cases, 4 deaths.

Netherlands: Flushing, March 21-28, 1 case.

Russia: Moscow, March 14-21, 4 cases, 1 death; Odessa, March 14-21, 6 cases, 1 death; St. Petersburg, March 14-28, 169 cases, 9 deaths; Warsaw, March 14-21, 3 deaths.

Turkey: Alexandrette, March 14-21, 3 cases, 1 death; Constantinople, March 15-22, 1 death; Smyrna, March 1-8, 1 death.

YELLOW FEVER.

Brazil: Rio de Janeiro, March 6-13, 38 deaths.

Colombia: Panama, March 26-April 2, 4 cases, 1 death.

Ecuador: Guayaquil, March 14-21, 4 deaths.

Mexico: Vera Cruz, March 28-April 11, 12 cases, 2 deaths.

CHOLERA—INSULAR.

Philippine Islands: Provinces, Feb. 14-21, 172 cases, 117 deaths. Not previously reported, 953 cases, 736 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Feb. 28-March 14, 159 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, Feb. 14-21, 2 deaths.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, March 6-13, 1 death.

China: Hongkong, Feb. 14-28, 15 cases, 15 deaths.

India: Bombay, March 3-17, 2,300 deaths; Calcutta, Feb. 28-March 14, 1,574 deaths; Karachi, March 8-15, 199 cases, 160 deaths.

Mexico: March 8-22, Siqueros, 3 cases, 2 deaths; *Villa Union*, 3 cases, 1 death.

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Address.

MEDICAL EDUCATION IN THE UNITED STATES.

PRESIDENT'S ADDRESS, DELIVERED AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT NEW ORLEANS, MAY 5-8, 1903.

FRANK BILLINGS, M.S., M.D.
CHICAGO.

One of the chief objects of the organization of the American Medical Association was the elevation of the standard of medical education in the United States. In the president's address, the Father of the Association, Dr. N. S. Davis, stated that "the purpose of the organization was the improvement of our system of medical education and the direct advancement of medical science and practice."[1] That medical education in that day was defective, as recognized by the founders of the Association, is shown by the report of the Committee on Medical Education in the year 1850. The committee said, in part, as follows: "Medical education is defective because there are too many medical schools; the teachers are too few. There are too many students. The quantity of medicine taught is too limited; the quality too superficial, and the mode of bestowal of the honors of medicine too profuse and too unrestricted."

For many years the Association showed its interest in and attempted to influence the elevation of the standard of medical education through a committee on medical education. The Transactions of the Association of the earlier years show many reports of this committee, which display much thought and effort on the part of the Association to improve the status of medical education at that period of time. James R. Wood, as chairman of the committee, in the year 1858, recommended that the various medical colleges of America be requested to send delegates to a convention of medical colleges, to consider the matter of medical education. This movement finally resulted in the formation of the Association of American Medical Colleges, which thereafter represented, to a degree at least, the American Medical Association in its efforts to improve medical education. Later, the Southern Medical College Association was formed. Together these associations represent about 80 per cent. of the regular medical schools of the country, and these colleges have, in a general way at least, fulfilled the minimum requirements prescribed by the rules of the associations in regard to the preliminary education of students, the length of the college course, and the character of the curriculum.

About twenty-five years ago the Illinois State Board of Health, through the splendid efforts of Dr. J. H. Rauch, its secretary, made a report on the number and character of the medical schools of the country. This board adopted a minimum of requirements of medical schools as a necessary step toward the recognition of their diplomas by the State Board of Health of Illinois. This minimum requirement of the State Board of Health was gradually increased from time to time, with the result that many of the medical schools were obliged to raise the standard of medical education to enable their graduates to obtain licenses to practice in Illinois. Other states followed Illinois in requirements for better methods of medical education, with the result that the standard of education in the country was very much improved.

MEDICAL SCHOOLS OF THE COUNTRY.

In the earlier days of our country, the need of physicians was met by the organization of medical schools, which were, as a rule, proprietary in character. These schools attempted the education of physicians on the then existing conditions of medicine by teaching in a didactic way the principles and theories of medicine and surgery. The branches usually taught at that time consisted of anatomy, physiology, chemistry, materia medica, obstetrics, the practice of medicine and of surgery. But little opportunity was offered in the great majority of the schools for extensive, practical teaching in anatomy or chemistry, and but a moderate amount of clinical work in the so-called practical chairs. The course of medicine in the college consisted of two annual sessions of four or five months. The course was not graded. The student attended all the lectures and clinics taught during his first year, and the second year was a repetition of the first. This class of schools was rapidly increased in the course of time. The chief reasons therefor were the fact that it was recognized that a connection with a medical school was profitable, directly and indirectly. The prestige which the teacher enjoyed among the graduates and the laity brought him a remunerative consultation and private practice. In most of the states it was easy to incorporate and obtain a charter for a medical college. It cost comparatively little to conduct and maintain the institution. Lecture rooms were obtained at trifling cost. The dissecting room was not worthy of the name of a laboratory, and the chief expense in maintaining it was the cost of dissecting material, which was usually deficient in quantity and poor in quality. Medical schools were organized all over the country, without reference to the needs of the people. Medical education was prostituted. To obtain a sufficient number of students many institutions showed a most degraded disregard of the moral and mental qualifications of the matriculates. The income of the school was wholly derived from the tuition of students, and no applicant was

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[1] Transactions A. M. A., vol. xvi, 1865.

APPLIED MEDICINE AND SURGERY.

To enable the student to utilize the knowledge of a thorough training in anatomy, physiology, chemistry, pharmacology, physiologic and physical chemistry, embryology, neurology and pathology, he should be afforded facilities of equal rank in clinical medicine and surgery. To supply the student with proper clinical facilities involves several important features. Special hospitals, which would be absolutely under the control of the medical school, would be necessary. The hospital should be constructed with a definite idea of teaching students and of making researches into the nature, causes and treatment of disease, as well as to care for a definite number of patients. Hospitals for general medicine, surgery and obstetrics would be essential. Such hospitals, with laboratories and equipped with instruments, apparatus and library, would cost for their building and maintenance a very large sum of money. With such hospitals it would be necessary to choose the professors of medicine, of surgery, and of obstetrics, with competent assistants, of the same type as the teacher of the fundamental sciences. They should give their whole time to the work of teaching and to original research in the hospital. They should be men who have proved their scientific fitness for the important positions by the contributions they have made to medical knowledge. They should rank with and receive the pay given to professors of important departments in arts, philosophy and science. When so paid, they would be free to expend all their energy to teaching, and to experimental medicine—a career which would enable one to be of the greatest possible service to mankind. No life's work could be fuller or of greater self-satisfaction, and surely none would be more honorable. From these teachers and investigators the student would obtain instruction of the same systematic methods of accurate observation and investigation which were employed in the fundamental branches. He would receive thorough, conscientious drill in the fundamental methods of examination of patients, and his knowledge of the fundamental sciences would be constantly applied in this work. The trained clinical teachers would direct the student in thorough, careful observation in the wards and at the operating table, would collect data to be submitted to experimental tests, and would conscientiously carry out the experiments in the laboratories of the hospital.

The brilliant discoveries which have made our knowledge of the cause and means of transmission of many of the infectious diseases have been chiefly due to the introduction of the experimental method of investigation. Teachers and investigators of the type mentioned will have the opportunity to make equally important discoveries in the broad field of the unknown in medicine. They will train students in the methods of research work and constantly increase the number of investigators in the domain of medicine. And there is need for such men. We may give the great practitioners who have taught clinical medicine their due meed of credit for their excellent, painstaking, unselfish efforts as teachers. They have added to the sum total of our clinical data, have utilized the knowledge of the pathologist and the physiologist in diagnosis, and have tested and judged the worth of therapeutic aids in the treatment of disease. But as teachers they have not made students investigators or experimenters. Not one of the recent great discoveries in medicine has been made by such a man. He has used as clinical material hundreds of cases of pneumonia, rheumatic fever, tuberculosis and chronic diseases by the score; his experience has taught him to recognize these diseases, even when the clinical manifestations are obscure, but he is no more successful than when he began to practice, in saving the life of the patient with pneumonia, in preventing endocarditis in rheumatism, in curing tuberculosis, or in checking the advance of a chronic hepatitis. It is time, therefore, that the clinical teacher should have the knowledge necessary to carry on experimental investigation, with hospital facilities for the work that the profession may become purged of the shame of helplessness in curing so many of the common diseases of mankind.

The patients who will be received in these hospitals will be fortunate. They will receive the most painstaking examination and study, and the experiments made on animals in the laboratory will benefit the patients directly, inasmuch as more rational therapeutic measures will be applied in cases so investigated. In addition to the clinical teachers, who will devote all their time to teaching and research work in the special hospitals, there will be quite as much need for the clinical teacher, who is in private practice, in the general hospitals. Under his direction the student may himself investigate a hospital or ambulatory case, and undertake the care of the patient. His rich and varied experience in hospital and private practice will enable him to round out the student's college education. He will impart to the student a better idea of medicine as a whole. He will coordinate and arrange the isolated facts of clinical and laboratory investigation, and give them their true and relative value. He will teach the student the art of medicine; he will teach him that human sympathy and encouragement of the sick and dying are a part of his duty as a physician.

It would be most practical to make the clinical work of the third year a clinical drill and experimental course, given in the special hospitals, and assign the students of the fourth year to the general hospitals and to the clinical teachers who are in private practice. All the general hospitals and dispensaries controlled by the medical schools could be utilized in the fourth year for this purpose, and afford the student an abundance of clinical material and the benefit of the experience of many clinical teachers. Many of the assistants in the special hospitals, of the third year course, would doubtless engage ultimately in private practice, and would, because of their scientific attainments, make excellent clinical teachers in the fourth year. A medical school conducted on the high plane advocated must necessarily be under the control of a university. Such a medical school would cost an enormous amount of money, and this can be commanded only by the trustees of a university of the highest order. That the money for the purpose of establishing and maintaining university medical schools with research hospitals and university clinical courses will be forthcoming can not be doubted. The world is awake to the great discoveries recently made in medicine. The wealthy men of this country have had their interest aroused as never before in reference to the possibilities and benefits which medical investigation will give to mankind. They now recognize that they and all posterity will be benefited by every new fact discovered in medicine, and that physicians thoroughly and scientifically trained are necessary to conserve the health of the people.

Three years ago Prof. W. W. Keen, in his address as President, deplored the fact that medical schools received relatively little aid in the form of endowments as compared with universities and colleges of philosophy, art and theology. Since that time several millions of dollars have been given for medical education and scientific research. The signs of the times point to a brighter future of medicine in America.

EDUCATION PRELIMINARY TO MEDICAL STUDY.

The subject of the educational requirements for matriculation in medical schools has been discussed at many meetings of this Association in its earlier years, and later by the college associations, by the American Academy of Medicine and by the various state boards of health.

The requirements were at first lamentably low, and the efforts of the Committee on Education of the American Medican Association and of the college associations had but little effect, because they possessed no legal power to control the schools.

The influence of the various boards of health of several states, notably Illinois, was more marked, inasmuch as these state boards possessed a mandatory power. The colleges were forced to adopt the minimum educational requirements of the state boards of health if their diplomas were to be recognized by the respective state boards.

These moral and legal influences to improve the preliminary requirements were almost nullified by the practice of a majority of the medical schools in admitting students whose educational status was examined into and judged by a committee of the college faculty.

This practice is still followed by a majority of the medical schools, and results in the admission of many students who are unable to fulfill the prescribed requirements. As a subterfuge, students are often matriculated conditioned in one or even several subjects. Then the student and the faculty committee forget all about the subject, and the student completes his course, goes into practice, and dies with the conditions still undischarged.

The present requirements of the college associations and of the various state medical examining boards and state boards of health amount, on the average, to a high-school education. The curricula and length of course of the high schools of the different states, and even in the same state, differ very substantially. However, if the medical schools now in existence would honestly require as a minimum education the diploma of a high school, without regard to the rank, it would be a marked advance over the present requirements as practiced by most schools.

We must admit, too, that there are medical schools of such a low educational grade that they have no right to demand of their matriculates as much even as a common school education. This fact that low-grade medical colleges exist is one of the most satisfactory explanations of the difficulty encountered in elevating the standard of preliminary requirements.

To get at the root of the matter the medical college must be brought up to the proper educational standard, and then, and then only, can be made a proper preliminary educational requirement.

UNIVERSITY MEDICAL COLLEGE.

The present status of medical science requires and demands a university medical college course. By university medical college is meant a medical school which is directly connected with and a part of a university; the university fixing the requirements and controlling the admission of students to the medical department. The method of teaching both the fundamental and the clinical branches is on the principles outlined above. To properly prepare for such a course the student should have, as a minimum preparation, at least two years of study in a good college or university. The requirements to enter a good college or university would insure a sufficient knowledge of the ordinary school branches and also Latin or Greek. During the two years' course in college his time would be well spent in the study of English, French, German, mathematics, history, philosophy, physics, chemistry, general and organic, and qualitative analysis, comparative anatomy and general biology. The amount of time to be devoted to each of these subjects would be the same as that of students of general science, as arranged in all college curricula, with the exception of a much more thorough course in chemistry, biology, physics and comparative anatomy.

So prepared, the medical matriculate would be able to grasp all the intricacies of the subjects of the fundamental branches of medicine. With the addition of the full medical college course, as outlined above, his education would be equal in culture to that of the graduate in arts and philosophy. At the same time, it would be practical and especially fit him for his work as a scientific investigator or practitioner, or for both.

With the medical profession so educated a physician would be, in truth, a member of a learned profession. From an educational point of view he would rank as an equal with the scholar in philosophy, law and theology. As a man he would be recognized as the greatest benefactor of mankind.

With the establishment of university medical schools the first two years of work in the medical school will consist of courses in pure science. Then, doubtless, all universities will adopt the plan which two or three universities have already put in practice. That is, that the student who completes the two first years of the science course of a university, or at a college of good standing, may enter the sophomore year of the university and take the first two years' work in medicine, as the sophomore and senior years of the bachelor's course, when he would receive the degree of S.B. The student who completes the three years of the arts or philosophy course at a university, during which he should take a large amount of work in physics, chemistry and biology, could then enter the medical college and after two years receive the degree of A.B. or Ph.B. After two years spent in the clinical school he would receive the degree of M.D.

This telescoping of the literary and medical courses affords the advantage of an economy of time, while it does not in any way lessen the value of the result to the student. In the one case the student secures the degrees of S.B. and M.D. after about six years of study, and in the other the degrees of A.B., or Ph.B., and the degree of M.D. at the end of seven years' study.

THE OUTLOOK OF MEDICAL EDUCATION IN THE UNITED STATES.

Medical education must advance to its proper level if it complies with the present status of the medical sciences and the demands which continued evolution in medicine promises.

What does this imply? It means that the private—the proprietary—medical school which is conducted for commercial reasons must go. Acknowledge, as we must, the great value which the best of these schools have been to the profession and to the country, all such schools have lived past the time when they can be of value. The continuation of these institutions henceforth will be harmful. They can not command the money to build, equip and maintain the laboratories and hospitals which a proper and adequate medical education demands. In the past their graduates have furnished the many great and influential medical and surgical clinicians of this country. In former days a graduate poorly prepared has been able, by indefatigable labor and post-graduate work, to place himself in the front rank as a clinical physician and surgeon.

To-day medical science demands primary instruction to fit a man as an investigator and scientific physician. If not properly educated he can not grasp the great problems which medicine presents to-day as he did the more simple clinical facts which comprised the art of medicine and surgery a few years ago. In the future medicine must be taught in the large universities of the country and in the state universities which are situated in or near large cities, where an abundance of clinical material may be commanded.

The state university and the college which desires to teach medicine, and is so situated that it can not command clinical material, should confine itself to teaching the sciences fundamental to medicine. These should be taught as pure sciences, and should be included in the course for the degree of S.B. A college or state university ambitious to teach the medical sciences can do so without great cost. To attempt to teach applied medicine without proper and adequate hospitals, and with an insufficient number of patients, would be irrational, nor can they command the necessary funds with which to do it. From such colleges and state universities the students could go to the larger institutions which are able to furnish the proper facilities for teaching applied medicine and surgery.

The general hospitals of many of the cities, now used by proprietary schools, could be utilized as clinical schools for both undergraduate and post-graduate teaching, conducted by the clinical teachers in the existing proprietary schools. Indeed, these hospitals could be utilized as university extension clinical courses. Necessarily they would have to be under the control and direction of a university medical school.

How many schools may be necessary to educate the number of doctors of medicine required annually in the United States? The question one can not answer, but it is safe to say that 2,500 graduates annually will fully supply the demand. This would imply about 10,000 to 12,000 matriculates. A minimum number of twenty-five and a maximum number of thirty-five medical schools should offer sufficient facilities to educate 10,000 students. The various state universities and the colleges which offer adequate science courses would educate a great number of students in the fundamental branches, or in the first two years of the medical course.

MEDICAL RECIPROCITY BETWEEN THE STATES OF THE UNION.

The low requirements of some medical colleges, and the want of uniformity in the requirements for a license to practice in the different states, has resulted in a condition which entails much hardship on a physician who desires to remove from one and to engage in practice in another state. The rules of most state boards of medical examination and of health are so stringent that a physician or surgeon of years of experience and of acknowledged skill and education, and the specialist who may be renowned in his field of work, are obliged, like the recent graduate, to take an examination in all of the branches of medicine and surgery in order to secure a license to practice in the state of his adoption.

To correct this evil it has been suggested by a member of the American Medical Association, and concurred in by others, that a national board of medical examiners be organized; that the board hold examinations at different seasons of the year in the various large cities, and that the diploma so obtained shall be recognized as a license to practice in any one or all of the states and territories. The measure suggested seems to be practical and feasible.

In addition to this plan, it remains to be said that the degree granted by the future university medical school will be undoubtedly recognized as an evidence of fitness to practice in any state in the Union. When we shall have a less number of schools and annual graduates the various states may safely and rationally become more liberal and discriminating in the conduct of their office.

THE INFLUENCE OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association should maintain its interest in the elevation of the standard of medical education, one of the chief reasons of its organization. Its influence in former years was principally moral. This was of considerable value, for the reason chiefly of the high ideals of the founders and first members of the Association, who advocated and fought for a higher standard of medical education. In the future its influence should be many fold that of the past, for with the reorganization of the profession, the better methods of conducting its affairs, the increased and probably very large membership, and its great medical journal, it should wield a great influence for good.

As the direct agent by which the American Medical Association may exert its influence in the elevation and control of medical education, the Committee on Medical Colleges and Medical Education should be made permanent and should be given adequate power and sufficient annual appropriation to make its work effective.

This Association should, therefore, stand for, and should use its whole power to improve, medical education in this country. It is said that we never exceed our ideals in practice, and that if we lower our ideals our conduct sinks to a lower level.

The American Medical Association should take as its ideal and standard of medical education the university medical college, with all the name implies in regard to the fundamental medical sciences, and to the clinical branches. It should use its influence to drive out of existence those proprietary medical schools which are conducted solely as money-making institutions. These measures can not be accomplished at once; but medical science demands it, the profession demand it, the people demand it, and look to the American Medical Association as the chief influence which shall accomplish this end.

To Whom Does a Prescription Belong?—In France it is the custom to give the prescription to the one who pays for it, according to a recent article on this subject by Carles in the *"Journ. de Méd. de Bordeaux."* The pharmacist in the cities merely keeps a copy of it and the prescription is given up with the medicine as it is paid for. In the country, the proportion of illiterate is so large that the pharmacist is always urged to keep the paper, and this is now the custom. The prescriptions are also kept when dispensed to members of benefit societies, as payment is made by the treasurer on presentation of the prescriptions. In case secrecy is desired the member can pay for his medicine out of his own pocket and thus claim the prescription. The pharmacist also keeps the prescription if he discovers that the physician signing it has made a mistake, rendering it impossible for him to dispense the medicine called for, until after consultation with the physician.

Orations.

CANCER AND IMMUNITY.

ORATION IN SURGERY, DELIVERED AT THE FIFTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW ORLEANS, MAY 5 TO 8, 1903.

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OMAHA.

On such occasions as this we take great pleasure in recalling the past and dwell with great delight on the achievements along the lines that have most engaged our attention. We, as surgeons, especially those whose professional activity began in the pre-antiseptic period, review the successive changes from that period of expectancy to the present period of aseptic accuracy with the greatest satisfaction. No one can fully appreciate the present status of surgery who is not personally familiar with the period when wound complications were the rule and when faith was pinned on the belief in "laudable pus."

However great the change has been in surgical mortality, in the great improvement in wound repair and in the comparative freedom from wound complications at present, when we consider the number of diseases treated surgically we must confess that many problems remain unsolved. We are not prepared to say, even now, as Boyer did in his great work, Traite des Maladies Chirurgicales (1814-1822), that he believed that surgery had reached perfection. The great advances of the past have taught us the imperfections of the present and have pointed out to us the lines of research for the future.

At the outset, we are not unconscious of the fact that the profession itself is not yet agreed on many well-founded propositions. Many still cling with too much tenacity to old and deeply-rooted doctrines. Progress has been so rapid. The surgeon has, perhaps, been in advance of the physician along scientific and practical lines. The physician has observed that the surgeon has gradually invaded his field, thus creating some antagonism, but it has become less apparent and more co-operation has been the rule since bedside observation and a clearer pathology have demonstrated the actual conditions.

In this connection, we are convinced that there is still too much difference of opinion between the physician and the surgeon regarding the so-called borderland cases. In that class of affections which primarily are so-called medical, and later may become surgical, in which the early stages are obscure, where no positive diagnosis can be made, where there is no improvement from the usual internal treatment, these constitute a class where an exploratory incision would not only make a diagnosis clear, but would frequently lead to a cure.

Still, too much time is wasted in the medicinal treatment of such affections as goiter, tubercular lymph nodes, pulmonary abscesses and gangrene, empyema, abscesses and tumors of the liver, obstruction of the biliary passages, diseases of the pancreas and tubercular peritonitis. Chronic Bright's disease and ascites due to hepatic affections, always believed to be purely medical, have recently received the attention of surgeons and the success has been sufficient to give much encouragement. The foregoing constitute a class of borderland cases in which it is often impossible to state where medical management ends and where surgical treatment begins.

Surgical advancement in the future will not consist so much in the radical changes in operative technic as in improvement in diagnosis and diagnostic aids. Many of our diagnostic formulæ are even now undergoing complete changes, and the future will lead us to a precision in the recognition of disease that we little dream of now. The early recognition of malignant disease is a problem of future development, especially malignancy affecting the internal organs. With our present aids it is impossible to recognize internal cancers sufficiently early to do a radical operation. Our only course at the present is an exploratory incision as soon as reasonable grounds for malignancy exist.

The field that seems full of promise and gives us hopes for great expectations in the future is that of immunity and immunization. It now seems that many tissue changes will be solved along these lines.

From our present viewpoint the question of immunity seems to tower above and overshadow all others. It involves the greatest problems for the future investigator to solve. Out of these researches will be evolved methods for the exact treatment of that great list of surgical affections which, at present, we can fortunately, to a great measure, avoid by exact asepsis and can control, to a great extent, by antiseptic measures when once developed. But we still stand helpless in the presence of severe forms of septicemia, pyemia, tetanus and other toxic invasions. Infections sometimes occur after the most carefully executed operative procedures. Accidental infections will always comprise a large proportion of our surgical material, a group of cases that furnishes a fatality all too great.

Our present helplessness in the presence of extreme toxemia, we must confess, lies in our imperfect knowledge of the exact conditions under which the toxins operate. We may say, in a general way, that toxic bodies attack and destroy cellular elements. When, however, we study this question of infection in a more serious manner, we find that a flood of light has been thrown on this problem by Ehrlich and his followers.

The two greatest problems of the future, cancer and immunity, shall engage our attention to-day. Malignant disease seems to be on the increase. We stand so helpless in its presence when fully developed that we exert our feeble energies and grasp eagerly for any fact that seems to offer new light for its better understanding. It will be our effort at this time to review, as briefly as possible, the more important facts known regarding the etiology of cancer and then, after making clear to ourselves the revelations thus far made in the recent studies of immunity, determine, if possible, what relations, if any, exist between the two.

These considerations were prompted by personal observations made in a number of cases of undoubted malignancy that indicated the probable infectiousness of cancer. It is well known to us all that the infectiousness of most infectious diseases was first determined clinically and that the clinical observations were later determined and confirmed microscopically and experimentally. The cases to be here related came under the author's personal care, and it is hoped that they may serve as contributory evidence to the observations already recorded by others *that malignant disease, under certain conditions, is infectious.*

Case 1.—Mrs. H., aged 40, of spare build, very small amount of adipose tissue, presented in the outer and upper quadrant of the left breast a hard, nodular, painful, movable, walnut-sized growth, of one year's duration. In the axilla could be felt a hazelnut-sized nodule. She had frequent lancinating, radiating pains in the breast. There were no evidences of acute or subacute inflammatory signs, no local redness or elevation of temperature. The clinical diagnosis of cancer of the breast was made and a radical operation was advised Various family matters prevented her from submitting to an immediate operation, so that several months passed, after which it was observed that the neoplasm had diminished in size and it finally disappeared.

It may be urged that this may not have been a cancer or that no one should make a diagnosis unless there be a confirmation by the microscope. Is the microscope always certain? We have all observed cases that ran a clinical course of malignancy after the microscopic findings indicated benignancy, and vice versa. The pathologist always inquires after the clinical features. He is disinclined to give an opinion unless he can know something of the history and symptomatology. The above case, in every detail, resembled many others that were demonstrated microscopically to be malignant, consequently it would appear that we are justified in the clinical diagnosis of cancer.

Case 2.—Mrs. J., age 35, presented herself with an inoperable, extensively ulcerating carcinoma, involving the outer half of the right breast. The breast was unusually large. The outer portion of the ulcerating surface had been in constant contact with the upper and inner side of the arm. Portions from both breast and arm were removed for microscopic examination and proved to be alveolar carcinoma. No operation. She died in three months.

Case 3.—Mrs. D., age 35. She came under observation with a typical epithelioma of the cervix uteri. The vagina was large and relaxed, so that the neoplasm rested in contact with the lower portion of the posterior vaginal wall. Hysterectomy was recommended, but was refused. She presented herself again in two months, in which time there had developed an epithelioma at the point of contact between the cervical growth and the posterior vaginal wall. An operation was done, but the patient died from recurrence eight months later.

Case 4.—Mrs. G., age 45. Came under observation with a typical cauliflower growth involving the cervix uteri. Small particles were removed, which proved, microscopically, to be carcinoma. The uterus was fixed, the growth appearing to be too extensive for operative interference. No operation was advised. After several months the neoplasm became smaller and gradually disappeared, the uterus becoming movable. At the present time, eight years later, she appears well.

Here we have four cases of undoubted cancer, each one of which presented some of the features of an infection, as in lupus or syphilis. Cancer is extremely slow in its development, its premalignant stage often lasting many years. This fact possibly may account for the negative outcome of inoculative experiments hitherto conducted. This long developmental stage is not unlike lupus, leprosy and other forms of undoubted infection. In two of our cases we observed secondary growths which appeared at points where the primary neoplasm was brought, more or less continuously, in contact with previously healthy surfaces, a very common occurrence in nearly all forms of infection. In two of our cases the neoplasm disappeared spontaneously, the disappearance depending, no doubt, on some form of katabolism not yet understood. The elucidation of this form of cytomorphosis will give the key to the control, inhibition and elimination of the atypical cell proliferation which constitutes malignancy.

The term cancer, so commonly employed, refers to growths made up chiefly of epithelial cells. There is really no good reason why the term cancer should be limited to epithelial growths. Cancer signifies "crab." It was originally used to signify malignancy and meant connective tissue growths as well as those of epithelial origin. For our purpose at this time we will limit the term cancer to epithelial neoplasms and we will confine these considerations to its etiologic factors.

The mystery of its origin seems as deep almost as in the days when cellular pathology was unknown. No problem in pathology has received more thought and speculation, no subject has had bestowed on it more earnest effort and unremitting toil. Regarding its etiologic evidence we must confess that we have only a mass of negative proof. When observers believed that they had found the specific organisms, scores of workers in the same field soon demonstrated their error. So, today, we can only say that the evidence which shows what we do *not* know of the cause of cancer is voluminous, and we must admit that we know little of its etiology.

We know something of its cell characteristics. We know that malignant disease is essentially a cell proliferation that has, biologically, many features that are opposed to the physiologic tissues in which they take their origin. We find an atypical life history in the cancer cells. The nucleus divides in an asymmetrical way. We note that unusual karyokinetic figures in the nucleus are usual in new growths, pointing to changes in the cellular life history. Regarding carcinoma, certain bodies have been demonstrated, believed by some to be parasites, having some causal relation to the cell changes.

It is a well-established fact that the nucleus perpetuates the nature and function of the cell, and any change in the nucleus changes the cell in its function and process of division. According to W. V. Shaw, "the growth of cancer cells is then to be looked on as an effort of reproduction in damaged tissue, the incidence of the damage falling on the nuclear structures."[1]

This statement is based on observations made by him in connection with experiments on free swimming larvæ which developed from the stimulation of ova of certain lowly organized animals, causing a proliferation of cells. The ova had not been fertilized by spermatozoa. Adult organisms were not developed, but larvæ capable of independent life. These results were obtained by stimulating the ova with strychnia and by mechanical movements of the ova. This cell growth was compared to growth of tissue in partially damaged structures. Shaw believes that such damage alters the nature of these cell structures so that the vegetative functions of the cell run riot and the cells become parasitic toward the organism in which the growth is taking place. This view seems to find support in those connective tissue growths that develop in tissues that have sustained a trauma and in which the sarcoma develops; or in epithelial growths that form on surfaces that have been subject to prolonged irritation, as exemplified by the chimney-sweep's and paraffin-worker's cancer forming on an old chronic dermatitis; or a cancer forming on the site of a prolonged irritation by the smoker's pipestem on the lower lip. We have seen many times that cancer develops in epithelial tissue that has been subjected to irritation for a long time, usually extending over a period of years. We have long recognized irritation to be at least one of the causative factors. Just what metabolic disturbances take place and what the underlying causes are, is not yet clear. That cancer is infectious has been proven by many clinical observations. This has been shown by Eberth, who collected 22 cases where cancer was transmitted from lip to lip, tongue and palate. Behla reported eight instances of death from malignant growths in physicians and surgeons who were inoculated from tumors and four instances of apparent human infection from cancerous animals, dog and hen. He also alludes to a cancer epidemic among the white mice in the Pathological Institute at Freiburg as evidence of the contagiousness of cancer (Hektoen). Roswell Park believes that, for New York state at least, cancer is increasing at an alarming rate.

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[1] The Lancet, Sept. 20, 1902.

Attempts have been made to show that cancer is endemic, peculiar to certain localities. Behla cites cases of Behrens, who found in a village ten deaths out of thirty-eight to be due to cancer. Pfeiffer, Powers and Friesinger maintain that in certain houses (cancer houses) and marshy districts in the vicinity of ditches and streams containing sluggish water, especially if the stagnant and polluted water were used for watering garden vegetables and for drinking purposes, cancer is relatively frequent (Hektoen). This would point rather to a microphyte than to a microzoon as the etiologic factor.

Since infection of living tissue is believed in every instance to be due to bacterial invasion, naturally bacteriologists directed their attention toward the discovery of a specific germ. Very soon we had a long list to enumerate. Plimmer of London examined in six years 1,298 carcinomata, and in 1,130 he believed that he found parasitic bodies. Sjöbring laid much stress on cell inclusions. Russell described his fuchsin bodies, which were spherical or oval. L. Pfeiffer of Weimar published several monographs on the protozoa as a cause of cancer. Eisen brought out his *Cancri amœbæ*. Korotneff believed that he had found an organism which he termed *Rhopalocephalus carcinomatosus*. Bosr found and described an organism that he called *Myxosporidia coccidia*. Gaylord of Buffalo described at great length bodies that he believed bore an etiologic relation to cancer. Sanfelice of the University of Cagliara emphasized the etiologic importance of bodies that he named *Saccharomyces neoformans*. A very large number of other publications on this subject made their appearance, none of which differed in any essential point from those bodies just mentioned.

While the presence of the aforesaid bodies described by the different observers can be demonstrated and are present in a large proportion of the cases of cancer, all the requirements necessary to prove them to be the organisms solely responsible for cancer have not been fulfilled. The requirements necessary are (1) the organism must be isolated; (2) a cancer must be produced when the organism is introduced into another body; (3) the organism must be recovered from the cancer produced. It has been shown that, while the first requirement has only apparently been fulfilled, the second has been, in a number of cases, seemingly produced. More careful investigations have proven that the experimental growths were not cancer. The third requirement has not been fulfilled.

All of the work mentioned above was carefully reviewed in all its details by the cancer committee, who, in their second annual report to the surgical department of the Harvard Medical School, showed conclusively that the bodies described by the various investigators under different names were not cancer nor the cause of cancer. I can do no better than to quote in full the results of their labors. They bear the marks of painstaking and conscientious work. The conclusions of the Harvard cancer committee were written by Edward H. Nichols and are as follows:

It has been claimed by the adherents of the theory of the parasitic origin of cancer that

1. A proliferation of epithelial cells analogous to the lesions seen in cancerous tumors can be produced by certain well-known protozoa (nodules caused by the Coccidium oviforme).
2. Certain skin lesions characterized by epithelial cell proliferation are due to the action of a so-called protozoon (Molluscum contagiosum).
3. Blastomycetes are constantly present in human cancers and are the cause of the lesion.
4. By experimental inoculation of animals with blastomycetes, true epithelial or cancerous nodules can be produced.
5. Finally, the well-known endocellular bodies seen in the protoplasm of cancer cells have a definite morphology, are parasites and the cause of cancer.

It has been the object of the investigators, the results of whose work appear in the preceding pages, to study each of these questions. As a result of the lines of work pursued by them under the direction of the Cancer Commission during the past year, it is concluded that:

1. The lesion produced by the Coccidium oviforme is essentially a process of chronic inflammation and is not analogous to the lesion seen in cancer.
2. The lesion of Molluscum contagiosum is characterized by certain changes in the epidermis, is not due to the action of a protozoon and is not analogous to cancer.
3. The so-called "blastomycetes" (saccharomycetes) of Sanfelice and Plimmer are torulæ.
4. The lesions produced by these "blastomycetes" (torulæ) are, essentially, nodules of peculiar granulation tissue, are not cancerous, nor, in any sense, true tumors.
5. Blastomycetes are not constantly present in human cancers.
6. The peculiar bodies seen in the protoplasm of a cancer cell are not parasites, nor the cause of the lesion, but probably are, in part at least, atypical stages of the process of secretion by glandular epithelium.

It is clear that in the present status of the etiology of cancer, bacteriologically considered, the case has not been proven. But it does not follow that it will not be shown that cancer is due to a specific and well-defined organism. It may be an organism so minute as not to have been brought within the range of the microscope. It is possible that no stains have yet been found that possess the requisite affinity for its complex molecular constitution. The necessary artificial medium for its cultivation remains for some future investigator to solve. Be it what it may, since the clinical features give strong evidence of the infectiousness of cancer, the search must and will be continued along the same lines.

In this search for a specific contagium, cellular metabolism must not be forgotten. Its consideration and study is perhaps more important than the isolation of a specific germ. It can not be denied that the more exact our knowledge of cytomorphosis becomes the clearer will be our understanding of cell proliferation. It has long been understood that there must be certain stimuli that cause cell growth and certain inhibitors that limit cell development and exercise control in accordance with the requirements of the tissues. Certain other influences bring about a disturbance of the normal equilibrium between the stimuli and the inhibitors. It is evident that the exact nature of the stimuli, the inhibitors, and the disturbers must be ascertained. This involves a study of the cell constituents and the fluids that surround it. As we see, it is a question of chemistry.

In this connection, it is important to take note of a very novel hypothesis bearing on the formation of new growths propounded by Homer Wakefield.

He believes that a neoplastic formation is not an exaggeration of anabolism, increased or excessive proliferation, but that it is a product of katabolic stasis; that is, normal cell division is unimpaired, the anabolic process continuing to the point of maturity of the cell. It attains the meridian in its life and reaches the post-meridian state when it should undergo normal katabolism, a complete dissolution and disappearance of the cell. Instead, something has supervened to check katabolic changes, the cell becomes superannuated and its existence is prolonged until finally it undergoes various degenerative changes. Normal cell production continues, but normal cell dissolution is retarded or abolished, hence the cells accumulate, producing the appearance of what is regarded as cell proliferation.

This condition Wakefield has termed katabolic stasis or subkatabolism. He states that the intercellular substance is richly alkaline and that the tissue cells are more or less soluble in it. The cells, during the period of their growth, generate sarcolactic acid and during this period they are richest in protoplasm. After the meridian the cells offer decreased resistance to the solvent powers of the alkaline medium and lose their protoplasm, the nucleus alone remaining.

He infers that, before the meridian is reached, the acidity produced by normal cellular activity protects the cells by its neutralizing effects on the intercellular alkalies and that this preserves the investment of protoplasm. Now, if from any cause, the normal alkalescence of the intercellular substance is reduced or if, in a given area, the acidity increases, katabolic stasis affects all the cells in that area. Suboxidation consequently takes place. It is therefore believed that cancer formation is an acid process.

Briefly, tumor formation, according to this hypothesis, rests on a stasis of katabolism, subkatabolism and suboxidation, in the presence of normal anabolism. The cell inclusions, observed by many investigators and regarded by them as protozoa, cancer parasites and as blastomycetes, Wakefield regards as products of disturbed nuclear division. This new hypothesis, at present, rests only on theoretical grounds, but the arguments are so thoughtful and so suggestive that they deserve careful attention. Their chief importance, at this time, consists in the bearing out and support of the methods of research along chemical lines.

We are all familiar with Virchow and the birth of cellular pathology, with Ehrenburg and the growth of bacteriology, and now we have arrived at, and are in, the humoral or chemical era. The trend of all research at the present time is beyond cells and beyond bacteria. It is to determine the chemical operations in and around the cells. This line of research began in the leucocytes because they were the most available. In their study it was possible to establish basic principles. From the leucocytes to the erythrocytes was only a step and then the epithelial and connective tissue cells received attention. This field of research is a new one. It is occupied by a vast army of patient and earnest toilers. The fruits of their labors will be beyond our greatest expectations. It is our present purpose to see if the cancer problem can be solved along these lines.

What has malignant disease to do with immunity? The entire subject of immunity has to do with infection. It has to do with its nature, mode of action and control. Has cancer any characteristics that pertain to infection? Bacteriologically we have found none. Clinically we have a mass of evidence that would seem to place cancer among the infectious diseases.

In order to have a clear understanding of the modern conception of immunity it is necessary to review as briefly as possible and in barest outlines without comment the most important features of our present knowledge of the subject. Much material that may seem essential to a complete elucidation of this great and important subject, had to be eliminated on account of the limited scope of this dissertation.

More than a century ago we find that John Hunter was familiar with some antiseptic properties of the blood. He found that a small amount of putrefying material could be added to a given quantity of fresh blood without producing putrefaction. Consequently, he advanced his doctrine of "the living principle of the blood." This, as an observation, was almost forgotten and its import was not fully realized until Nuttall, in 1888, began his systematic work in Flugge's laboratory, studying the antibacterial properties of the body fluids, especially the blood serum.

The greatest impetus to the study of immunity was given by Metschnikoff in calling attention to the participation of the leucocytes and other cells in the process of infection, establishing his well-known theory of phagocytosis. His views are so well understood that we need only to call attention to them at this time.

Following Nuttall, Pfeiffer discovered, in 1894, "the extracellular disintegration and solution of cholera spirilla in the peritoneal cavity of immunized guineapigs."

The greatest attention and interest was aroused by Behring's great discovery of antitoxic immunity. Bacteriologists at once endeavored to elucidate by elaborate researches the exact way in which immunity was established. Chief among these was Ehrlich. It was soon shown, however, that immunity in most bacterial infections did not depend, in the main, on the antitoxic principle.

Pfeiffer's phenomenon afforded a starting point from which Metschnikoff, Bordet, Ehrlich and Morgenroth began their labors and brought forth a series of discoveries that have been epoch making.

A series of antibodies were differentiated and classified as antitoxins, antienzymes, cytotoxins, agglutinins, precipitins and coagulins. Antibodies were in turn produced by these, with the exception of the antitoxins.

It was determined that to every cellular group of an animal species there appears to correspond a specific cytotoxin. These various toxins have been termed leucotoxin, neurotoxin, spermotoxin, nephrotoxin, thyrotoxin, etc.

These antibodies have been divided into two groups, first, the antitoxins which are single bodies; second, the cytolysins, whose antagonistic effects require the cooperation of two bodies.

Of these two bodies, the one which actually destroys the foreign cells is normally present in the cells or fluid of the organism, but it seems incapable of action without the intermediation of a body which is distinguished from it by a greater resistance to heat. The two elements composing cytolysins exist quite independently of each other so that one may be present without the other or be artificially removed without affecting the other.

To demonstrate the mode of action and constitution of the specific antibodies, Ehrlich has propounded the theory of receptors or side-chains. The atomic grouping of the toxin molecule, which affects the union with antitoxin as well as with a particular cell, he has designated as haptophore groups.

In view of the fact that certain molecule groups of the living protoplasm favor the taking up of certain poisons, he has termed them receptors. According to his theory of antitoxic formation, after the introduction of toxins the receptors are produced in excess and finally are thrown off into the blood as useless ballast. The free circulating receptors are the antitoxins, termed amboceptors, intermediary bodies. The action of antitoxins is explained thus. They take charge of the haptophore groups of the toxin molecules and prevent them from approaching the receptors of the tissues.[2] There are as many receptors as there are toxins, while almost every day new ones are discovered.

Behring gives the most exact and brief definition of Ehrlich's antitoxin theory: "The same substance, which, when incorporated in the cells of the living body, is the pre-requisite and condition for an intoxication, becomes the means of cure when it exists in the circulating blood." Every antiserum protects only against substances through which it becomes immunized. Every antiamboceptor protects only against its particular amboceptor.

Ehrlich and Morgenroth found, in experiments with goat's blood, thirteen different new lysins which represent so many receptors. "The receptors are in the cells, not for the purpose of linking poisons to the cells, but to seize certain foodstuffs, particularly proteids, and the toxins, bacterial and other foreign cellular substances, if capable of inducing the immunizing reaction, chance to have the requisite combining affinities for the receptors."

The living body possesses bactericidal and cytolytic substances which may protect it by destruction of invaders or may injure it by destruction of its own cells, according to the mates with which they are paired.

In considering the physiologic mechanism of the cells we find that they are designed, primarily, for the assimilation of food, and secondarily, to meet pathologic conditions, the production of antitoxins, cytolysins and other similar bodies. The receptors are in the cells for the purpose of taking up foodstuffs, chiefly proteids. The toxins and bacterial cellular substances have combining affinities for the food receptors, if they are capable of inducing an immunizing reaction.

In producing immunization against bacteria, it is the intermediary body (amboceptor) which is generated. It has been found that these antibodies have a specific relation to the substances which caused their formation, as has been shown by the injection of a specific serum into an animal at certain intervals, of toxins, against which an antitoxin is desired.

The specific nature of these antibodies is further shown in their application to serum diagnosis, as shown by the Widal agglutination test for typhoid fever and the serum test in the diagnosis of bacillus dysenteriæ Shiga, an organism shown to be the cause of acute dysenteries by Flexner, Vedder and Duval.

When Roux and Yersin discovered diphtheria antitoxin and Ehrlich the origin and mode of action of antitoxin, a lasting foundation for the study of immunity was laid. It was positively shown that "soluble toxins enter, as assimilable substances, into combination with constituents of the body cells for which they have an affinity," and are enabled to produce immunity or to exert toxic effects.

The expectations that we should soon be enabled to solve all questions regarding the action of toxins after the discovery of soluble bacterial toxins, have only partly been realized, especially regarding the action of the pyogenic micrococci, which concerns us most as surgeons.

However fruitless, hitherto, the practical results regarding toxins of many pathogenic and especially pyogenic organisms, the principle has been established, and it is only a question of method and time when all body toxins and their antitoxins shall be definitely known.

Pfeiffer directed his attention to the bacteria and found substances, toxins, in cholera spirilla, which became free only after the bacteria were dead and which were termed intracellular poisons. This was a most important step in advance, but we must acknowledge that we know as yet very little about the action and nature of intracellular bacterial poisons.

It is interesting to note from the result of Flexner's experiments with venom that their action on red blood corpuscles, leucocytes and nerve cells is like that of duplex cytotoxins, which depend on the combination of intermediary bodies contained in the venom on one hand, with corresponding complements in the cells or fluids acted on. This is shown by the addition of venoms to fresh blood, which brings about the quick destruction of the red blood corpuscles. If the fresh blood has been washed with an isotonic salt solution, so as to remove all the complement, we find that the corpuscles are not dissolved, but agglutinated. It seems that the venom serves chiefly to bring "into necessary relations with constituents of the body cells, poisons we already harbor or may generate, but which are harmless without the intervention of intermediary bodies."

Flexner and Noguchi have shown that the leucotoxic, the neurotoxic and other cytotoxic properties of venom depend on combinations of venom, intermediary bodies with complements contained in the cells poisoned by venom, or in the fluids bathing these cells, indicating that the snake venom contains only a part of the complete poison.

Flexner and Noguchi also demonstrated that hemorrhages in various tissues of the body resulting from poisoning from certain venoms is due to the presence in venom of a cytotoxin which has the power to dissolve endothelial cells, which they termed endotheliolysin (hemorrhagin). It causes extravasation of blood through its direct solvent action on capillary endothelium.

The hemolysins have been most extensively studied because of their great pathologic significance, and it has been found that many bacteria have hemolytic power. The secondary anemias, so constant in streptococcus infections, in pneumonia, typhoid fever and other diseases, afford a most striking example.

Normal blood serum contains antihemolysins which protect red blood cells from bacterial hemolytic agents. Associated with hemolysins are bacterial hemagglutinins, possessing the power to clump red corpuscles.[3]

Heuter and Klebs believed that thrombi were due to the coalescing of red blood corpuscles. Welch calls attention to hyaline thrombi formed by agglutinated red corpuscles. White corpuscles are agglutinated by certain bacteria and also by pus cells.

What is urgently needed is a separation of these poisons and a determination of their source, constitution, mode of action and degree of specificity.

It will not be out of place here to allude to the studies made of the ductless glands, because of their supposed bearing on immunity. Sajous urges that the adrenal extractives have a decided affinity for oxygen, offering a key to tissue respiration and to the functions of all other organs now classed as the ductless glands. It has been found that the red corpuscles are not the only carriers of oxygen, but that the blood plasma contains and distributes this gas. Schmiedeburg, Jacquet, Claud Bernard and others demonstrated the existence of an oxidation ferment in the plasma, and these bodies are now entertained as an oxygen-laden secretion. This secretion is believed to permeate nearly all the body elements. The blood also contains a fibrinogen body which combines in certain quantities with fixed portions of the plasma's oxygen. The changes in the temperature of the blood were traced to variations in the amount of the fibrinogen in the plasma. The adrenals have been shown to be connected with the anterior pituitary body by various sympathetic ganglia. The anterior pituitary body is regarded as the governing center of the adrenal system. Over-activity of this body increases the adrenal secretion, consequently oxidation, therefore vital resistance. Depression of the activity of the pituitary body causes decreased supply of oxygen, consequently depressed vital processes.

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[2] Ehrlich: Schlussfolgerungen, p. 176.

[3] Heuter-Klebs, p. 731.

The thyroid secretion, thyreoidin, has been shown to sustain the efficiency of the pituitary body. Excessive thyreoidin production stimulates the pituitary body and produces exophthalmic goiter. Deficient thyreoidin production leads to myxedema. The adrenals, the pituitary body and the thyroid gland constitute the adrenal system. According to this line of research, it is believed that toxins act directly on the adrenal system, and, by decreasing or increasing its secretion, decrease or increase the oxidation process. Certain toxalbumins and many drugs stimulate the adrenal secretory powers to a certain limit, and, when exhibited in excessive doses, depress or arrest the functions of this system.

The posterior pituitary body has been shown by Berkley, Andriezen and others to be the chief functional center of the nervous system. It is the center for such emotions as shock, excitement, etc. It governs all organic functions through the nervous system. The secretions of the pancreas and spleen, according to Schiff, and later by Herzen, unite and change trypsinogen into trypsin, a solvent for the albuminous bodies in the pancreatic juice. This ferment performs an important part in immunizing processes, in that it destroys toxalbumins.

Viewing these labors in the light of Ehrlich's researches, the oxidizing substance represents the amboceptor; the spleno-pancreatic internal secretion, trypsin, represents his complement. To produce a proteolytic action of trypsin, fibrinogen and the oxidizing substances are required. These views are somewhat at variance with those commonly accepted, but are of sufficient importance to deserve consideration in this connection.

From the foregoing it would seem that the doctrine of phagocytosis plays an unimportant rôle. But we find that the French, or phagocytic school, at the head of which is Metschnikoff, recognizes the full significance of acquired immunity and the cytolytic principles represented by the co-operative action of intermediary bodies and complements. The German, or humoral school, led by Ehrlich, recognizes the leucocytes to the fullest extent.

The chief difference between the French and the German schools consists in the belief by the advocates of phagocytosis that the complements reside in the leucocytes, whereas the adherents of the humoral school believe that they exist in the blood plasma.

While, in what has here preceded, we have been concerned in the consideration of chemical problems, we must not overlook the fact that behind all is a governing force which resides in the central nervous system.

The practical outcome of these studies has been found in the production of antitoxic sera, some of which have been proven to have a definite and exact effect under certain conditions. We find these sera divided into two principal groups, (1) those that have an anti-bacterial action, and (2) those that have a purely antitoxic action. Of all the sera the diphtheritic is best known. According to Welch the mortality of diphtheria has been reduced from 40 per cent. to 15 per cent. by its use.

Antitetanus serum has been disappointing. Reports coming to us from different sources are conflicting, the mortality ranging from 0 per cent. to 70 per cent. from practically the same methods, which consist in administering the serum by the subcutaneous, intracerebral and the spinal methods. Antityphoid serum has failed to fulfill expectations even more than antitetanus serum. The antistreptococcus serum of Marmorek, while it seems to have exerted a specific effect in purely streptococcic infections, appears to exert no influence in the presence of mixed infections. The antipneumococcic serum has not yet emerged from the experimental stage. Nothing can be said of its effects. The antiplague sera of Haffkine and Yersin demonstrated that, as a preventive, it reduced the number of cases to one-twentieth and the mortality in a given number of cases was reduced from 33 per cent. to 13 per cent. (Calmette). The antitubercle serum has been shown to have a specific effect on tuberculous tissue, but remains powerless in the presence of mixed infections. The antivenom serum has been demonstrated to have a positive usefulness in certain snake bites. Calmette's antivenin has been proven to be of undoubted use in leprosy.[4]

Many other sera have been described, but their usefulness thus far has been shown to be of an uncertain nature. Consequently, we will leave them out of consideration at this time.

When we pass in review all that is positively known in relation to the question of immunity, we can not deny that some of the principles underlying this great question have, in a measure at least, been revealed. The evidence is conclusive that "the same substance which, when incorporated in the cells of the living body, is the pre-requisite and condition for an intoxication, becomes the means of cure when it exists in the circulating fluid."[5]

Ehrlich, in his investigations of diphtheria toxins, demonstrated "that soluble toxins enter as assimilable substances into direct combination with constituents of the body cells for which they have an affinity, and only thereby are enabled to bring about immunity or to exert toxic effects." Further, in connection with Metschnikoff, Bordet, Morgenroth and Ehrlich, it is shown that "the organism possesses a power to produce substances specifically antagonistic to all sorts of foreign cells, cellular products and derivatives. The substances capable of inducing this immunizing reaction appears to be mainly of an assimilable, albuminous nature, or at least intimately associated with such material."

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[4] F. A. Packard and Robt. M. Willson: Americal Journal of the Medical Sciences, December, 1900.

[5] Behring's Definition of Ehrlich's Theory Concerning Antitoxin. Welch.

The principle of toxins and antitoxins has become as firmly established as any other in medicine or surgery. We have noted that antitoxins from pure cultures have a certain affinity for and possess immunizing power in specific infections, but fail in the presence of mixed infections. We see at once that failure to immunize does not violate the principle, but that the method of application has been at fault. We know that diphtheria toxin has a specific effect for the products of the Klebs-Loeffler bacillus, and that it controls and cures in the presence of these, but fails when there is an admixture of other forms of infection. This is shown by the 15 per cent. mortality which still exists. We have noted that antistreptococcus, tubercular and plague sera have a specific and a decided effect in pure infections, but that they fail in the presence of other specific germs. We observe with satisfaction the certainty of the action of a given antitoxin in its union with the toxin from which it was produced. It at once becomes apparent that, in the presence of several toxins or a mixed infection, it will require several antitoxic substances, a combination of antitoxic sera, or a serum containing different kinds of amboceptors, so combined as to meet and unite with the several toxins in a given case. Coley endeavored to meet such indications by combining streptococcus and bacillus prodigiosus sera in treating inoperable sarcoma.

These observations presage a revolution in therapeutics, which perforce means a refinement in diagnosis, beside which, what we do now will scarcely bear comparison.

The inferences to be drawn from the foregoing indicate that the future work will be biochemic. It appears that the solution of cell metamorphosis, as it is observed in pathologic conditions, will be in the field of chemistry. Ehrlich's theory of the side-chains has given us a working hypothesis almost as practical as the atomic theory when applied to chemistry. It is not an idle dream to believe that the revelations of the future will not only consist in a complete exposition of cells and body fluids, or a perfect understanding of the governing brain centers, but may extend to the life principle itself, although life itself may and will ever belong to the unknowable.

Our chief interest, however, will always center in the cell and its governing influence. Just what influences are responsible for normal cell division may never be known. But it is within the bounds of human possibility to know what influences may be responsible for atypical and excessive cell growth. Excessive cell growth, both in the leucocytes and connective tissue cells in acute infections, we can assume to be due to toxins that are in excess of the amboceptors. The existence of cytolysins and anticytolysins is now undisputed. The one destroys, the other protects the cells. We have noted that the chief function of a receptor molecule is to combine with nutrient molecules, a metabolic, a chemical process. The birth and growth of the cell is restricted within certain limitations and is regulated by chemical law. Now the problem depends on our ability to ascertain the exact influence that carries cell division beyond its normal bounds and causes excessive cell growth as we observe it in malignant new growths. That the process is one of localized excessive nutrition is apparent. The localities of predilection are frequently at points where the cellular elements are exposed to frequent insults, where the tissues are damaged, establishing a *locus minoris resistentiæ*, as, for example, in the mouth, gastrointestinal tract and the female reproductive organs. A point of least resistence, damaged tissue, if you please, always offers a soil for bacterial invasion. Cancer very often develops in tissues that have long been irritated, no doubt liberating a complement that unites with a specific infection when introduced under proper conditions. Such is not always the case, however. In fact, we know that in the majority of tissues that sustain irritations and almost constant traumatism for many years never become malignant. The simple traumatism does not develop cancer. A specific toxin must be introduced, probably also an intermediary body to complete the side-chain, which increases karyokinetic energy. We have noted in our studies of immunity that the life or death of the cell depends on its intra- and extra-cellular composition, so we may say that the whole process, whether it relates to normal or excessive cell growth, is chemical.

An objection may be urged at this point, which consists of the fact that the propositions of immunization thus far considered affect groups of cells extending over a wide range, i. e., the vascular, the muscular and the glandular or cerebrospinal systems. It has been shown that cancer is always at the outset, and often throughout its entire course, absolutely a local disease. It would not seem rational to attempt immunization of the entire system against a strictly local disturbance. We will naturally turn our hope toward a method that will enable us to affect local immunization.

That local immunization is possible has been demonstrated by P. Römer in the following convincing abrin-immunization experiment. As is well known, abrin, which is the toxalbumin of the jequirity bean, will produce a severe conjunctivitis in animals and men. Ehrlich had demonstrated that rabbit's conjunctivæ became immune after the instillation of abrin. Römer instilled into the right eye of the rabbit weak abrin solutions, the dosage being rapidly increased until immunization was produced. In three weeks the rabbit was killed. It was then shown that if the right conjunctiva, which had undergone severe inflammation, were rubbed and macerated with a certain amount of abrin and injected into a healthy animal, it had no effect. But, if the conjunctiva of the left eye, which had received no instillation, were rubbed and macerated with abrin and injected into an animal, death always followed. Römer concluded from this observation that in conjunctival immunizations a part of the autotoxin existed in the conjunctiva itself. A local antitoxin was produced.

It would seem that these results establish definitely the principle of local immunization in indifferent tissues. These observations have an important bearing on the adaptation of the cells in local affections. That local affections of various forms or general affections with local manifestations can be best managed by the local introduction of exceedingly small doses of the specific remedy, was shown by Professor Bouchard before a recent meeting of the Egyptian Congress. He found that articular rheumatism disappeared after the injection *in situ* of small doses of salicylic acid, in some cases only half a grain. We must conclude that local cell metabolism can be influenced by local rather than by general diffusion. The inhibition of excessive cell growth must be accomplished in the same way.

It would seem, then, that the cancer question must be solved along the lines of chemistry. Since we know that contagious or infectious energy does not depend on the bacterium itself, but on its products, which are purely chemical, it would seem that it matters little whether the specific parasite is found or not. Since the cancer germ has thus far successfully eluded the most vigilant search it becomes more and more evident that in the field of chemistry will be found the solution for our problem.

It will be difficult to rid ourselves of time-honored views. Purely theoretical speculation, like the hypothesis of cell proliferation from inclusions of embryonal matrices according to Cohnheim, must give way to the demands of modern science that insist on actual observations and practical demonstrations.

Now then, will it be unreasonable to hope, that when protoplasmic changes are thoroughly understood and when the body sera have given up their secrets and the influences that govern cell growth, that we may also find the antibodies which will inhibit cell multiplication beyond natural bounds?

The studies in the field of immunity have, as yet, only assumed the proportions of the initiatory stage. A vast unexplored wilderness lies before us. The pioneers have begun their work well. They have outfitted themselves in a manner that will, in the near future, enable them to throw unexpected light in the pathway of their conquest of discovery. They are only on the verge of this vast domain. What lies beyond the borders we can no more foretell than could Boyer know that in twenty-our years after his death we should have anesthesia and that in fifty years the world would have antiseptic surgery. And yet, in the light of our present knowledge the hope, amounting to a conviction, arises in us that even in our lifetime, if we are spared a few years more, we will have an exact bio-dynamic and bio-chemic science that will make diagnosis accurate and precise d one that will enable us to treat and control all in- tions with an exactness not now possible. While the rgeon is now constantly encroaching on the field of the internist, the time is not far distant when the physician may not only reclaim his own, but with it that large group of neoplasms known as malignant growths that from time immemorial has been the exclusive property of the surgeon.

REFERENCES.

Ueber Antikörper gegen die bacteriolytischen Immunkörper der Cholera. R. Pfeiffer und E. Friedberger. Berl. Klin. Woch., No. 1, 1902.

Das Streptokokken-Gift. A. Marmorek, Berl. Klin. Woch., No. 12, 1902.

Ueber die Vielheit der Complemente des Serums. P. Ehrlich und H. Sachs, Berl. Klin. Woch., Nos. 14-15, 1902.

Ueber den Mechanismus der Amboceptoren-Wirkung. P. Ehrlich und H. Sachs, Berl. Klin. Woch., No. 21, 1902.

Ueber die Complementophilen Gruppen der Amboceptoren. P. Ehrlich und H. T. Mashall, Berl. Klin. Woch., No. 25, 1902.

Ueber die Receptoren der Milcheiweisskörper. F. Meyer und L. Aschoff.

The Huxley Lecture on Recent Studies of Immunity, with Special Reference to Their Bearing on Pathology. Wm. H. Welch, The Medical News, Oct. 18, 1902.

The Present Status of Serum Therapy. Frederick A. Packard and Robert Willson, The American Journal of the Medical Sciences, December, 1902.

A Résumé of Some Recent Researches Relating to Cytolysis and Immunity. Dr. T. Mitchell Prudden, The Medical Record, Feb. 14, 1903.

Experimentelle Untersuchungen über Abrin- (Jecquiritol) Immunität. P. Römer, Archiv für Ophthalmologie, I-II Band, 1 Heft, S. 73.

The Internal Secretions and the Principles of Medicine. C. E. de M. Sajous, The Monthly Cyclopædia of Practical Medicine, January, 1903.

New Methods of Medical Treatment. Editorial, Medical Record, March 7, 1903, p. 380.

Leukaemie-Pseudoleukaemie-Haemoglobinaemie. Schlussfolgerungen von Geh. Med. Rat. Prof. Dr. P. Ehrlich, Frankfurt a. M.; Privatdocent Dr. A. Lazarus in Charlottenburg, und Dr. F. Pinkus in Berlin. Verlag, Alfred Hölder, Wien, 1901.

Ehrlich's Seitenkettentheorie und ihre Anwendung auf die kunstlichen Immunizirungsprozesse. Prof. Dr. Ludwig Aschoff. Verlag von Gustav Fischer, 1902.

The Recent Buffalo Investigations Regarding the Nature of Cancer. Address of the President, Trans. American Surgical Association, 1901.

SOCIAL CONDITIONS IN AMERICA IN THEIR RELATION TO MEDICAL PROGRESS AND DISEASE.

ORATION IN MEDICINE, DELIVERED AT THE FIFTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW ORLEANS, MAY 5 TO 8, 1903.

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Another spacious year with its varied channels of energy and activity in medicine has closed. While a faithful chronicle of the facts, data and achievements showing the progress of internal medicine for that brief period would have proved an appropriate topic, I have availed myself of the choice privilege granted by this Association of selecting my theme, and purpose to consider the subject of the relation of American social conditions to the progress of medicine and disease and the import of modern economic and professional tendencies in forecasting the immediate future.

The state of American society, founded on democratic ideals, is one in which the true function of the physician has ever been both intellectually and morally beneficent. It has ever been the fate of the medical profession, however, to have its past outgrown and stifled by the enthralling energy and life of its present and to forget to fix its gaze on what is grand and significant in inherited associations and opportunities. Conversely, the fundamental principle of human development, to-wit, that the present is quickly passing under the control of the future, which transcends an enlightened self-interest in the present, is yet to be fully realized and appreciated. In the life of our civilization the physician has constantly found himself in the presence of golden opportunities to render a service to the community, to add his private thought to the public opinion. His high calling and the stage of social development from which he has proceeded have ever invited to the development of an expanding and humane spirit. He has been, however, in many cases too closely chained to his special work. Per contra, the individual member of commanding worth and formidable individuality, like the Spartan and the Greek, has fortunately lent his own spirit to the genius of the great organism—the medical profession—and its higher destiny. That genius is no sluggard, and the motive of action is not the pursuit of gain or of personal aggrandizement, but an incessant advancement of our art and science and an application of the faculties to the higher interests of civilization. What is needed in medicine from the standpoint of sociology at the present day in America is the true "scientific spirit clothed with human interest," to give force and direction to the means available, not only with a view to the application of science to the healing art, but also to enable our profession to find its true place in the body politic and its intrinsic importance as a factor in modern civilization.

While there are certain things and events common to all in our psychic and social development, enlightened society will grant that the larger events in American history, assuming that "the first duty of society is the preservation of life and the comfort of its units," have not been so much dominated by legislative authority and social customs as by the march of science, more particularly medical and hygienic. In a country as vast as ours, however, there could be no uniform law covering the details of results in matters medical. These have been in the past and will in the future vary somewhat with the climate, physical conditions, degree of culture and opportunities presented by the widely separated regions. As a consequence, in displaying proportions and the practical results of scattered sections, the final adjustment of their claims only becomes perceptible and appreciable in their broader and higher generalization. The whole range of American historic data and events indicates an imperishable foundation of scientific achievement, and furthermore establishes firmly a relationship between medicine and the scientific principles underlying social conditions and phenomena that is both positive and vital. As touching the American medical history of the long past, we can see the major advances and their influence on social laws and the progress of civilization only by grouping data and established facts and applying the process of generalization to these composite phenomena. In this connection it is to be regretted that our possession of unclassified facts is increasing with uncomfortable rapidity. A comparative and historic study of the medical literature of America, taking any of the older countries as a standard of comparison, in respect to this method of generalization, can scarcely prove even measurably satisfactory. Much of the history of native medicine is crude and it were impossible to give it either crystallized or concrete form. Epoch-making discoveries and important, far-reaching scientific effort is justly the boast of the American profession. Systematic effort at a rigid classification of facts by the modern statistical method, however, has not been made, and only a partial scientific use of the ever-advancing events for the different historical periods has been attempted.

The concrete, comparative and historic method of study which alone furnishes a proper basis for generalization and serves to point out the relations of medicine to other human activities, would insure a wholly fresh treatment of the earlier medical annals of America. The physician in his economic or professional dealings has not followed his self-interest in comparison with his measure of enlightenment to an equal extent with men in other lines of human activity, but the fruits of his unselfish labors are, when taken collectively, presented in the form of a heterogeneous mass of details. It should be recollected that it is only the larger events, the accurately grouped facts after the method of generalization to which I have referred, that go to make up the bulk of medical history and medical law. The practical results of the method of simple generalization would show clearly the final utility of medical and sanitary knowledge in the social universe and manifest its relation to everyday life. Obviously in a young republic like ours something must be allowed to propinquity—to nearness to a confusing and disordered mass of facts and phenomena.

It has been well said: "A landscape is beautiful because distance has reduced its chaos of details into order."

Those endeavoring to make a personal study of the medical and sanitary requirements of our insular possessions, more especially under new and changed conditions, can not hope to gain more than a fragmentary knowledge. Much important and accurate information touching the social, climatic and medical conditions and necessities, however, is available through the Division of Insular Affairs, in the War Department at Washington. It is clearly incumbent on the organized profession of the United States to undertake studies on a larger scale than that of individual effort. Moreover, the interrelations between tropical medicine and the sciences before alluded to, i. e., social and sanitary, is a question for the immediate future; thus step by step may we hope to erect a stairway that will lead to a new temple of knowledge.

The foundation for social order, education and a fair measure of self-government under military rule having been laid both in Porto Rico and the Philippines, there is presented to the profession of the United States an opportunity amounting to an obligation to carry into those new possessions the light of modern sanitary and medical science. The peoples of those islands are as clearly entitled to the benefits offered by our science and art as they are to those pertaining to their fundamental civil and personal rights, as guaranteed by the Constitution of the United States.

From the America that Cortez invaded until the present the most treasured resource of our nation to the physician has, in a peculiar sense, been human life, and in respect to this economic principle we are, at present writing, merely following in spirit our thoughtful forebears. The medical profession never has valued life in terms employed in denomination nor by its productive power, but rather measured it from a divine and humanitarian standpoint. Certain it is that with advancing civilization there has come a higher and higher appreciation of the value of agencies intended to promote longevity and minimize disease and suffering. And this tendency to preserve human existence, apart from sentimental considerations, is born of a principle long adhered to by the medical profession and continuously unfolding itself in the individual and in organized medical bodies. It is clear, without seeming extravagance of statement, that greater justice is done by the medical profession of America to the condition of society just pointed out than in foreign lands, since it is more thoughtful for the youth and hope of our profession. It is to the flower of that youth, with its new and hidden virtues, that we must look for disclosures in the province assigned to the higher and more complex professional bodies of the future. Modern democratic institutions, including medical schools, are in the ascending scale of civilization, infusing into our profession men who are armed with potent resources from the pedagogic world.

The present-day educational facilities and developments show an ever-increasing beneficent tendency, and the standard of qualification has passed, or is passing, beyond the stage in which there is a mere desire to acquire an elemental knowledge of disease and its treatment in this country; a new character and a new vital and moral force is happily presuming to show itself in public action for the benefit of mankind. This genius stands ready to kindle its fires and materially aid in offering the means of human welfare and the revelation of new truths.

An appreciation of this fact by professional bodies is necessary in respect of the future; for medical societies organized to obtain the highest potency must compete successfully with other societies, or they will vanish from view in the stress of social and scientific evolution.

But though the obscure rival of the Goddess of Minerva, who had broken the loom of Arachne in her jealousy, executed wonderful tasks by her unaided strength, in the process of progress towards higher efficiency the individual ceases to be a factor of first importance. The process of development, whether considered in its economic, political or purely professional relations, demands the subordination of the interests of the individual to the larger interest of the organic whole. The dominant and controlling feature underlying an infinite variety and complexity of details of that upward movement of professional and social evolution is compatible with a remarkable simplicity of governing principle. Our plain duty is accordingly to endeavor to understand the nature of that governing principle which is distinctive and characteristic in that it does not regard the interest of existing members as supreme, but is seeking to establish conditions which are favorable to the interests of a larger future.

As regards the question of the relation of medical work and progress to our social system, the time is probably ripe for a revision of certain elemental and fundamental principles and customs, although it is obvious that neither social agencies nor the general public manifest a proper comprehension of its necessity. While science is telling us about the pathologic intricacies of disease processes, their bacteriologic causation and cure with unparalleled rapidity, important social and economic questions that affect especially the comfort and health of our teeming town-bred populations are subordinated. Again, in a land of popular civil government the medical profession should be organized in a manner that would render it equal to enlarged duties which naturally should devolve on it. I refer to such matters as the control and regulation of asylums for the insane, municipal health boards and the municipal hospitals for the sick poor, for contagious diseases and the like.

Certain tendencies of modern American life, considered with reference to the welfare both of the medical profession and general public, offer a most promising field for investigation and progress. The temptations of the practical, over-strenuous life of the present and past generations have left their impress on our profession. Something, however, must be ascribed to our nervous climate, reinforced by certain elements of the American spirit-aggressiveness and an unconcealed idealism. Neither should the powerof the initiative of the American, his shrewdness and his energy be overlooked. It may be doubted, however, whether there have been accomplished achievements and results commensurate with the impetuosity that characterizes all paths of professional activity. The universal spirit of haste has taken possession of our professional life; it permeates the air of the age, and the principal cause of this state of affairs is to be found in our ardent, every-day ways of living, and its cure must result from a readjustment of the home life and habits of the professional and other classes. It means a return from our present-day restlessness and rush to a quieter period, to a "Mansfield Park," with its charm of quiet village life; a return to a normal life, with natural intellectual tastes, and to calm, patient, original observation that fosters vital force and successful endeavor.

If authors and investigators were to bring forward only definitive and well-weighed pronouncements on all points at issue, it would carry us from the surface to the heart of things, and our labors would be more strongly marked by originality and power.

The spirit of undue haste which characterizes our national life is nowhere better exemplified than in American medical literature, despite its many virtues, its broad, liberal spirit and freshness. Never, in American history, whether deliberately or unconsciously, has so much current literature been placed at the disposal of physicians. Too generally medical thought and opinion, which is not of necessity medical truth, finds literary expression. The obvious weakness of it all is an enforced tendency to waste one's time in reading matter which is unapproved by common opinion. Extending this thought, it may be questioned whether to carry views and ideas beyond the domain of existing knowledge does not hinder rather than facilitate progress.

There is a list of honor among American writers, and it embraces authors whose literary product shows not only a sharp scrutiny of facts, but also the highest and most characteristic utterances in medicine. Indeed, the worth and power of American medical literature, either in its content or method, scarcely receives an unprejudiced estimate abroad.

In the field of letters we point with inordinate pride to the late Dr. Oliver Wendell Holmes, and our contemporary, Dr. S. Weir Mitchell. Fiction by medical authors lives and will live in America.

It may be questioned whether American nationalism, as evidenced by the creation of a native literature, should be the principal aim, although the consistent use of American material is to be advised and encouraged. We need to retain the conservative European spirit and keep wide ajar the door that leads to the treasures of continental literary traditions. Foreign peoples are and have been immigrating by the hundreds of thousands yearly; they have penetrated into the remotest points of this country, carrying effective training with them in many instances. Hence, admitting that the prescience of genius is the possession of many, there are fewer distinctly American medical authors than at first blush would appear.

> "The Celt is in his heart and hand,
>   The Gaul is in his brain and nerve;
> Where, cosmopolitanly planned,
>   He guards the Redskin's dry reserve."

Acknowledgment is due the great value and significance of the unparaleled heritage handed down by the older nations, particularly England, Germany and France. The path of fame for a nation no less than for an individual lies in the direction of constructive effort and sensitive receptiveness of the impressions and tendencies of the age irrespective of territorial limitations, and of a keen sympathy and close touch with the movements of the times in all lands.

Our literature is not an indigenous growth, yet stern of purpose; it is not, and, let us hope, never will be, sluggish in turning to foreign sources. It has, however, developed certain characteristic features, a distinct national flavor and a perfume "as plainly native as the arbutus."

American industry, with its attendant wealth and power, and the enlarged opportunities it offers to all classes of society for successful business enterprise, has quite generally proven attractive to and often filled with fervent hope the American physician, and with increasing means he has found his social position to improve.

In America the achievement of considerable financial success, however, is possible without taking high ground in a professional or ideal sense. The medical profession is integral in the effects of our economic evolution; it obtains stray glimpses of the avenue of glittering gold; but its central effort, if it desires to remain true to human perspective, contemplates a systematic development of its pecuniary, mental, moral and social powers.

The tendency to gregariousness in American cities is in no specific direction more evident than in the medical profession; hence, success is and will continue to be an increasing difficult problem, a circumstance to be reckoned with, no matter what our meaning and ideals as a national profession. This portends in its last analysis the necessity of better training and equipment for every-day duties of the practitioner.

America stands in need of further reform in medical education and the immediate establishment of one authority—one licensing body; and self-created schools must place themselves in a position in which they can worthily assist in the execution of a scheme of higher national medical education. Professional ascendency in future will demand the creation of a homogeneous and adequate standard of qualification for entrance into medical schools.

The relation of social conditions to disease is a topic that is becoming more and more insistent with the reflections that are the natural accompaniment of advancing knowledge.

A backward look reveals an embryo nation steeped in an arduous task, the subjugation of a continent, at the expense of unceasing physical toil. This necessitated an open-air existence, which resulted in a vigorous, hardy race. Then followed the integration of frontier villages, of larger and smaller towns, and life meanwhile became brighter and more piquant. For long generations the abandonment of rural life, the changed habits of living, the enforced pursuit of new and less healthful callings, too often from motives of personal comfort and even social expediency, and the universal tendency to overcrowding in town populations, resulted in a modification of the character and incidence of all leading diseases. It goes without saying that respecting the effects of our social conditions and climate on disease, the particular standpoint of our fathers was radically different from that of their children. Floyd M. Crandall has recently directed forcible attention to the fact "that never have such radical changes been witnessed in the habits of life and in human diseases as those in this country during the last half century."

Fortunately, agencies are at work looking to the socialization of the American agriculturist and the amelioration of the ills due to overcrowding in large municipalities. This is a movement which in the entirety of its scope embraces numerous potent forces whose federation promises to effect in time rural social regeneration. An organized effort has in several states been already initiated, and in the conferences held and in contemplation looking to the betterment of rural life, the co-operation of the medical profession is invited. Modern agencies, as improved highways, the introduction of the telephone, trolley lines, rural mail delivery, are socializers no less than economic facilities. In addition to these physical influences, marked improvement also comes from increased educational opportunities, farm organization and the various functions of the church.

These socializing influences and forces tend to counteract the current of bygone days from the farm to the city; they likewise bid fair to become a factor of first importance in minimizing, if not actually counteracting in due season, the ill effects of over-dense urban populations. It may, however, be remarked that the impoverished classes, especially the great immigrant contingent, will be far less likely to return to a rural environment than the well-to-do, and yet it will shortly affect the social and economic conditions as well as the vital statistics of the wage-earning classes. We may confidently expect a greater physical efficiency, a higher bodily standard, though municipal sanitation will be always required, and remain the principal factor in strengthening the powers of resistance to hostile environment. One point of common agreement is that as a result of the rapid advances in sanitation and improved methods of treatment, there has been a notable decrease in prevalence and fatality of most infective diseases, particularly those more or less fostered by overcrowding (e. g., phthisis, diphtheria, diarrheal diseases, etc.). Three well-defined classes, however, have, according to the census for the decade ending May 30, 1900, distinctly increased; they are cancer, affections of the kidneys and the degenerations, fatty and fibroid. Thus during an increase in the population of 50 per cent. in the United States myocardial degenerations have increased 150 per cent. and certain types of chronic nephritis have also risen in frequency to nearly 200 per cent. The determination of the causes of this rapidly increasing frequency of these morbid states is clearly the task of the medical profession.

Respecting the degenerations—myocarditis, arteriosclerotic changes and kidney diseases—Crandall says: "The power of alcohol in the form of malt liquors to produce degenerate changes is so well known to pathologists that the conclusion is irresistible that the radical increase in these diseases comes largely from changed drinking habits."

The notable increase in these morbid conditions, however, is not due to a single cause, and substantial progress can not result from too much emphasis on any one agency whose undoubted potency remains undemonstrated.

It is probable that a more universal application of refined methods of diagnosis accounts in a measure at least for the apparent disparity in the number of cases of nephritis and myocardial degeneration in recent times as compared with the showing of older statistics.

The census between 1890 and 1900 indicates an increasing prevalence of two additional diseases, in respect to both of which progress in our knowledge has been slow and never encouraging. I refer to diabetes mellitus and lobar pneumonia. The census previously referred to indicates that chronic diabetes mellitus has nearly doubled in point of frequency in a single decade.

While we shall continue to look to the bacteriologic laboratory for the discovery of the definitive cause of this metabolic ailment, and to the pathologist for a mind's-eye picture of the morbid state of the tissues, the data obtainable from an investigation of the manner and habits of life, which exert more or less etiologic influence, are of intrinsic medical importance and would serve as accessory factors in diagnosis as well as straws for the application of measures for treatment.

Although impossible to recognize a boundary line between the "variables of health" and disease in chronic diabetes mellitus, it can not be doubted that abnormalities of the glycolytic functions of the liver and pancreas, associated with inappreciable structural changes (more especially in the cells forming the islands of Langerhans) which interfere with proteid metabolism and the metabolic disturbances, are dependent in large measure on the overuse of the mind, intemperance and irregular habits of body; in a word, on improper modes of living.

Physiology has contributed much to the intricate processes involved in the nutritional diseases. Morbid physiology (general pathology) is most intimately bound up with the modes and predilections of American life, particularly of the so-called privileged classes.

TABLE I.

No.	Age.	Sex.	Nationality.	Accompanying Circulatory Lesions.	Accompanying Renal Lesions.
1	54	Male.	German.	Absent.	Absent.
2	56	Male.	Irish.	Absent.	Acute diffuse nephritis.
3	66	Female.	Irish.	Chronic endocarditis, mitral and aortic.	Chronic interstitial nephritis.
4	35	Male.	American.	Hypertrophy with dilatation.	Chronic interstitial nephritis.
5	68	Male.	American.	Hypertrophy with dilatation.	Absent.
6	63	Male.	American.	Mild carditis with dilatation.	Chronic interstitial nephritis.
7	11 m	Male.	American.	Mild carditis with dilatation.	Acute nephritis.
8	82	Male.	Not given.	Chronic endocarditis.	Fatty kidneys.
9	56	Male.	American.	Mitral reg.	Absent.
10	36	Male.	American.	Chronic endocarditis.	Acute parenchymatous nephritis.
11	60	Male.	American.	Arterial sclerosis.	Interstitial nephritis.
12	50	Male.	Italian.	Acute endocarditis (vegetative).	Interstitial nephritis.
13	43	Male.	American.	Hypertrophy, left ventrical.	Chronic interstitial nephritis.
14	50	Male.	Italian.	Acute endocarditis (vegetative).	Chronic nephritis.
15	67	Male.	Not given.	Beginning endocarditis.	Slight chronic nephritis.
16	87	Female.	Scotch.	Hypertrophic arterial sclerosis.	Chronic diffuse nephritis.
17	36	Male.	Italian.	Dilatation.	Chronic diffuse nephritis.
18	27	Female.	American.	Dilatation.	Acute parenchymatous nephritis.
19	24	Male.	Austrian.	Dilatation.	Acute parenchymatous nephritis.
20	20	Female.	Irish.	Chronic endocarditis.	Chronic interstitial nephritis.
21	58	Female.	American.	Gen. atheroma.	Chronic interstitial nephritis.
22	27	Male.	East Indies.	Pericarditis, chronic.	Chronic interstitial nephritis.
23	47	Female.	Irish.	Acute pericarditis.	Chronic interstitial nephritis.
24	46	Male.	American.	Fib. pericarditis.	Chronic interstitial nephritis.
25	27	Male.	American.	Fib. pericarditis.	Chronic interstitial nephritis.
26	47	Female.	German.	Absent.	Parenchymatous nephritis.
27	39	Male.	Irish.	Acute pericarditis.	Chronic parenchymatous.
28	50	Male.	Irish.	Acute pericarditis.	Absent.
29	26	Male.	Italian.	Pericarditis.	Absent.
30	60	Male.	Irish.	Pericarditis, diffuse.	Absent.
31	34	Male.	American.	Mild carditis, chronic.	Absent.
32	70	Female.	Irish.	Hypertrophy and dilatation.	Chronic interstitial nephritis.
33	78	Male.	American.	Hypertrophy and dilatation.	Chronic interstitial nephritis.
34	34	Male.	Italian.	Hypertrophy and dilatation.	Tuberculosis of kidneys.
35	18	Male.	Italian.	Pericardial effusion.	Cloudy swelling.
36	19	Male.	American.	Acute endocarditis.	Acute nephritis.
37	51	Female.	American.	Acute endocarditis.	Acute nephritis.
38	62	Male.	Irish.	Atheroma coronary arteries	Diffuse nephritis.
39	69	Male.	American.	Arterial sclerosis.	Absent.
40	62	Male.	Irish.	Arterial sclerosis.	Chronic nephritis.
41	74	Male.	Irish.	Hypertrophy and dilatation.	Chronic diffuse nephritis.
42	55	Male.	Not given.	Aortic endocarditis.	Chronic interstitial nephritis.
43	82	Male.	American.	Hypertrophy and dilatation.	Chronic interstitial nephritis.
44	45	Female.	English.	Chronic pericarditis.	Absent.
45	49	Female.	American.	Chronic pericarditis.	Chronic B. disease.
46	62	Female.	American.	Brown atrophy.	Absent.
47	22	Male.	Not given.	Brown atrophy.	Chronic diffuse nephritis.
48	60	Female.	Irish.	Chronic endocarditis.	Chronic diffuse nephritis.
49	27	Male.	Scotch.	Chronic pericarditis.	Absent.
50	63	Male.	Irish.	Arterial sclerosis.	Chronic nephritis.
51	73	Male.	English.	Mitral reg.	Chronic interstitial nephritis.
52	50	Male.	American.	Chronic endocarditis.	Absent.
53	*50*	*Male.*	*American.*	*Endocarditis and myocarditis.*	Atrophy left kidney.
54	73	Male.	English.	Endocarditis and myocarditis.	Chronic diffuse nephritis.
55	51	Male.	American.	Aortic endocarditis. Chronic pericarditis.	Parenchymatous degeneration.
56	38	Male.	American.	Aortic endocarditis. Acute pericarditis.	Cloudy swelling.
57	77	Male.	Not given.	Mitral reg.	Chronic diffuse nephritis.
58	68	Female.	Irish.	Arterial sclerosis.	Chronic nephritis.
59	45	Male.	Irish.	Acute Fib. pericarditis	Parenchymatous degeneration.
60	58	Female.	Irish.	Chronic endocarditis.	Chronic diffuse nephritis.
61	17 m	Female.	American.	Chronic endocarditis.	Absent.
62	54	Female.	Irish.	Brown atrophy and aortic stenosis.	Chronic interstitial nephritis.
63	53	Male.	American.	Dilatation and hypertrophy.	Chronic parenchymatous nephritis.
64	66	Female.	Irish.	Chronic mild carditis.	Chronic interstitial nephritis.
65	53	Male.	Not given.	Chronic mild carditis.	Parenchymatous nephritis.
66	24	Male.	American.	Chronic mild carditis.	Slight chronic nephritis.
67	26	Male.	Chinese.	Chronic mild carditis.	Cloudy swelling.
68	49	Male.	Irish.	Mitral reg. and mild carditis.	
69	23	Female.	American.	Mitral reg.	Fatty acute parenchymatous.
70	71	Female.	Not given.	Chronic endocarditis Arterial sclerosis.	Small w. kidney.
71	47	Male.	American.	Chronic endocarditis. Arterial sclerosis.	Cloudy swelling of kidney.
72	41	Male.	American.	Endocarditis, chronic.	Cloudy swelling.
73	74	Female.	Irish.	Endocarditis, chronic	Chronic diffuse nephritis.
74	83	Male.	German.	Endocarditis, chronic	Chronic interstitial nephritis.
75	47	Female.	German.	Mitral reg. and fatty degeneration.	Chronic parenchymatous nephritis.
76	65	Female.	Irish.	Acute endocarditis.	Sclerotic kidney.
77	67	Male.	English.	Acute endocarditis	Absent.
78	46	Male.	American.	Cardiac hypertrophy and dilatation.	Parenchymatous nephritis.
79	34	Female.	American.	Cardiac hypertrophy and dilatation.	Chronic interstitial nephritis
80	26	Male.	American.	Mitral reg.	Parenchymatous nephritis.
81	67	Female.	German.	General atheroma.	Parenchymatous nephritis.
82	24	Male.	American.	Chronic pericarditis and endocarditis.	Parenchymatous degeneration.
83	2	Female.	American.	Chronic pericarditis and endocarditis.	Absent.
84	56	Female.	Irish.	General atheroma.	Sclerotic kidney.
85	16	Female.	American.	Chronic endocarditis.	Chronic interstitial nephritis.
86	55	Male.	Norwegian.	Endocarditis	Acute nephritis.
87	50	Male.	Irish.	Mitral reg. and aortic stenosis.	Acute nephritis.
88	57	Male.	American.	Mitral reg. and aortic stenosis.	Sclerosis of kidney.
89	72	Male.	German.	Cardiac hypertrophy.	Chronic parenchymatous nephritis.
90	70	Female.	Irish.	Arterial sclerosis.	Chronic parenchymatous nephritis.
91	85	Female.	Not given.	Ulcerative endocarditis.	Chronic nephritis.
92	45	Male.	American.	Endocarditis, chronic.	Chronic nephritis.
93	53	Male.	American.	Endocarditis, chronic.	Cloudy swelling.
94	64	Female.	Irish.	Arterial sclerosis.	Cloudy swelling.
95	14	Female.	American.	Cardiac dilatation.	Acute nephritis.
96	72	Female.	Irish.	Chronic endocarditis.	Parenchymatous nephritis.
97	79	Female.	German.	Arterial sclerosis.	Chronic nephritis.
98	58	Male.	American.	Hypertrophy and dilatation.	Chronic interstitial nephritis.
99	60	Female.	American.	Beginning pericarditis.	Congestive.
100	53	Male.	Not given.	Chronic endocarditis.	Congestive.
101	49	Male.	Hungarian.	Dilatation, heart.	Congestive.
102	58	Male.	American.	Atheroma of aorta.	Congestive.
103	81	Male.	Irish.	Acute pericarditis.	Chronic parenchymatous nephritis.
104	53	Male.	American.	Acute pericarditis.	Chronic parenchymatous nephritis.
105	32	Male.	American.	Acute pericarditis.	Chronic parenchymatous nephritis.
106	34	Male.	American.	Acute pericarditis.	Parenchymatous nephritis.
107	31	Male.	American.	....	Parenchymatous nephritis.
108	50	Male.	Irish.	Acute pericarditis	Parenchymatous nephritis.

TABLE I.—Continued.

No.	Age.	Sex.	Nationality.	Accompanying Circulatory Lesions.	Accompanying Renal Lesions.
109	71	Male.	Swiss.	General atheroma.	Chronic interstitial nephritis.
110	63	Male.	Irish.	General atheroma.	Chronic interstitial nephritis.
111	73	Male.	Irish.	Mitral reg.	Chronic interstitial nephritis.
112	40	Male.	American.	Mitral reg.	Chronic interstitial nephritis.
113	55	Female.	Irish.	General atheroma.	Chronic interstitial nephritis.
114	19	Female.	American.	Hypertrophy and dilatation.	Chronic interstitial nephritis.
115	62	Male.	American.	Hypertrophy and dilatation.	Beginning inter. change.
116	65	Female.	English.	Arterial sclerosis.	Chronic nephritis.
117	60	Male.	American.	Fibrinous pericarditis.	Cloudy swelling.
118	62	Female.	American.	Mitral disease.	Interstitial nephritis.
119	43	Male.	American.	Cardiac hypertrophy.	Chronic diffuse nephritis.
120	47	Female.	American.	Sero-fib. pericarditis.	Acute diffuse nephritis.
121	62	Male.	American.	Cardiac hypertrophy.	Chronic interstitial nephritis.
122	37	Male.	American.	Hypertrophy and mitral lesion.	Chronic diffuse nephritis.
123	62	Male.	Irish.	Mitral and aortic disease.	Chronic interstitial nephritis.
124	42	Male.	American.	Hypertrophy and arterial sclerosis.	Chronic interstitial nephritis.
125	81	Female.	American.	General arterial sclerosis and hypertrophy.	Chronic interstitial nephritis.
126	64	Male.	Irish.	Endocarditis and pseudocarditis.	Chronic interstitial nephritis.
127	56	Female.	Irish.	Mitral disease.	Chronic diffuse nephritis.
128	19	Male.	German.	Mitral valvulitis.	Acute parenchymatous nephritis.
129	46	Female.	American.	Pericarditis and endocarditis.	Chronic interstitial nephritis.
130	36	Male.	American.	Pericarditis and endocarditis.	Chronic parenchymatous nephritis.
131	45	Male.	Irish.	Pericarditis and endocarditis.	Chronic interstitial nephritis.
132	55	Female.	American.	Aortic stenosis.	Chronic parenchymatous nephritis.
133	41	Female.	American.	Aortic stenosis.	Beginning parenchymatous nephritis.
134	40	Male.	American.	Chronic pericarditis.	Chronic interstitial nephritis.
135	23	Male.	American.	Chronic pericarditis.	Chronic interstitial nephritis.
136	28	Female.	American.	Chronic endocarditis.	Parenchymatous chronic nephritis.
137	60	Male.	American.	Fatty degeneration.	Parenchymatous chronic nephritis.
138	48	Male.	American.	Acute pericarditis.	Chronic interstitial nephritis.
139	37	Male.	American.	Atheroma of aorta.	Slight parenchymatous nephritis.
140	79	Male.	American.	Atheroma of aorta.	Abscess of kidney.
141	50	Female.	American.	Hypertrophy and dilatation.	Interstitial nephritis.
142	71	Male.	Irish.	Hypertrophy and dilatation.	Stone in left kidney.
143	27	Male.	Russian.	Mitral disease.	Chronic diffuse nephritis.
144	34	Male.	American.	Acute endocarditis.	Chronic diffuse nephritis.
145	53	Male.	American.	Acute endocarditis.	Large pale kidney.
146	61	Male.	American.		Large pale kidney.
147	54	Male.	Not given.		Parenchymatous nephritis.
148	59	Male.	Irish.	Fatty degeneration.	Parenchymatous nephritis.
149	36	Male.	American.	Dilated right heart.	Cloudy swelling.
150	14	Male.	American.	Chronic pericarditis.	Congested kidney.
151	43	Male.	German.	Hypertrophy and mitral reg.	Multiple cysts.
152	19	Male.	American.	Hypertrophy and mitral reg.	Cloudy swelling.
153	31	Male.	German.	Hypertrophy and mitral reg.	Cloudy swelling.
154	75	Male.	American.	Hypertrophy and mitral reg.	Chronic interstitial nephritis.
155	64	Male.	Irish.	Chronic endocarditis.	Chronic interstitial nephritis.
156	41	Male.	Irish.	Chronic endocarditis.	Cloudy swelling.
157	53	Male.	Scotch.	Mild carditis.	Interstitial chronic nephritis.
158	21	Female.	American.	Endocarditis.	Interstitial chronic nephritis.
159	63	Female.	Not given.	Aortic endocarditis.	Parenchymatous nephritis, chronic.
160	36	Male.	American.	Fatty degeneration.	Chronic parenchymatous nephritis.
161	70	Male.	Italian.	Fatty degeneration.	Chronic interstitial nephritis.
162	38	Male.	Scotch.	Fatty degeneration.	Chronic parenchymatous nephritis.
163	38	Male.	American.	Chronic endocarditis.	Large white kidney.
164	55	Male.	Irish.	Mitral reg.	Chronic interstitial nephritis.
165	61	Male.	Irish.	Chronic pericarditis.	Chronic interstitial nephritis.
166	50	Female.	American.	General atheroma.	Chronic interstitial nephritis.
167	31	Male.	American.	General atheroma.	Chronic parenchymatous nephritis.
168	29	Male.	American.	Chronic endocarditis.	Cloudy swelling.
169	26	Male.	Irish.	Acute pericarditis.	Fatty degeneration.
170	28	Female.	Irish.	Acute pericarditis.	Cloudy swelling.
171	62	Male.	German.	Mitral lesion.	Chronic interstitial nephritis.
172	78	Male.	Irish.	Cardiac hypertrophy.	Chronic interstitial nephritis.
173	53	Male.	American.	Chronic endocarditis.	Chronic nephritis.
174	26	Female.	Not given.	Chronic endocarditis.	Chronic nephritis.
175	76	Female.	German.	Mitral and aortic.	Chronic interstitial nephritis.
176	47	Male.	American.	Acute pericarditis.	Chronic nephritis.
177	54	Female.	Irish.	Mitral and aortic lesion. General atheroma.	Chronic diffuse nephritis.
178	50	Male.	Not given.	Chronic endocarditis.	Chronic interstitial nephritis.
179	59	....	American.	Acute fibrinous pericarditis and endocarditis.	Chronic diffuse nephritis.
180	27	Male.	American.	Ulcerative endocarditis.	Fatty degeneration.
181	70	Male.	American.	Arterial sclerosis.	Acute nephritis.
182	43	Male.	Not given.	Chronic pericarditis.	Chronic interstitial nephritis.
183	37	Male.	English.	Chronic pericarditis.	Chronic interstitial nephritis.
184	45	Male.	German.	Pericardial effusion.	Fatty kidney.
185	52	Male.	American.	Cardiac hypertrophy.	Chronic parenchymatous nephritis.
186	73	Male.	German.	Myocarditis.	Chronic interstitial nephritis.
187	52	Male.	American.	Myocarditis.	Chronic interstitial nephritis.
189	23	Female.	American.	Myocarditis.	Chronic interstitial nephritis.
190	67	Male.	Irish.	Myocarditis atheroma.	Fatty degeneration.
191	40	Male.	German.	Fatty heart.	Acute nephritis.
192	53	Male.	Irish.	Fatty heart.	Interstitial nephritis.
193	46	Female.	Irish.	Fatty heart.	Fatty kidney.
194	52	Male.	American.	Chronic myocarditis.	Chronic interstitial nephritis.
195	26	Female.	Scotch.	Fatty heart.	Subacute parenchymatous nephritis.
196	39	Male.	American.	Hypertrophy.	Chronic interstitial nephritis.
197	60	Female.	Hungarian.	Endocarditis, mitral.	Chronic parenchymatous nephritis.
198	50	Female.	Irish.	Arteriosclerosis.	Diffuse nephritis.
199	38	Male.	American.	Arteriosclerosis.	Slight parenchymatous nephritis.
200	28	Male.	American.	Chronic pericarditis.	Slight parenchymatous nephritis.
201	39	Female.	American.	Brown atrophy.	Gran. kidney.
202	38	Male.	American.	Cardiaç hypertrophy.	Interstitial nephritis.
203	53	Male.	German.	Sclerosis, mitral and aortic balms.	Interstitial nephritis.
204	51	Male.	Irish.	Hypertrophy and fatty degeneration.	Chronic parenchymatous nephritis.
205	75	Female.	Irish.	Chronic endocarditis.	Slight interstitial nephritis.
206	67	Female.	Irish.	Hypertrophy, left ventricle.	Chronic interstitial nephritis.
207	65	Female.	American.	....	Interstitial nephritis.
208	3 m	Male.	American.	....	
209	70	Male.	German.	Old valvulitis.	Gran. kidney.
210	45	Male.	American.	Aneurism arch aorta.	Chronic interstitial nephritis.
211	6 m	Female.	American.	Aneurism arch aorta.	Chronic interstitial nephritis.
212	2	Female.	American.	Aneurism arch aorta.	Chronic interstitial nephritis.
213	47	Male.	American.	Aneurism arch aorta.	Interstitial nephritis.
214	85	Male.	Not given.	Endocarditis with calcification.	Chronic interstitial nephritis.
215	29	Male.	American.	Endocarditis with calcification.	
216	49	Male.	American.	Sclerosis, mitral.	Chronic interstitial nephritis.
217	56	Male.	American.	Sclerosis, mitral.	Parenchymatous nephritis.

TABLE I.—Continued.

No.	Age.	Sex.	Nationality.	Accompanying Circulatory Lesions.	Accompanying Renal Lesions.
218	18	Male.	American.	Sclerosis, mitral.	Parenchymatous nephritis.
219	68	Male.	German.	Endocarditis.	Interstitial nephritis.
220	72	Male.	Irish.	Endocarditis, mitral.	Interstitial nephritis.
221	63	Male.	Irish.	Sclerotic valvulitis.	Interstitial nephritis.
222	46	Male.	American.	Chronic valvula II. D.	Chronic parenchymatous nephritis.
223	68	Male.	Irish.	Myocarditis.	Parenchymatous nephritis.
224	42	Male.	American.	Atheroma aorta.	Parenchymatous nephritis.
225	52	Male.	American.	General atheroma.	Absent.
226	51	Male.	German.	Cardiac hypertrophy with dilatation.	Swollen and mottled.
227	60	Male.	Irish.	Cardiac hypertrophy with dilatation.	Acute nephritis.
228	42	Female.	Scotch.	Chronic pericarditis.	Pyonephrosis.
229	40	Male.	American.	Chronic pericarditis.	Acute diffuse nephritis.
230	10	Male.	American.	Chronic pericarditis.	Chronic parenchymatous nephritis.
231	32	Male.	American.	Chronic endocarditis.	Absent.
232	2	Male.	American.	Chronic endocarditis.	Fatty degeneration.
233	76	Female.	Irish.	Hypertrophy and dilatation.	Chronic diffuse nephritis.
234	50	Female.	American.	Hypertrophy and dilatation.	Chronic diffuse nephritis.
235	61	Female.	German.	Cardiac hypertrophy.	Fatty degeneration.
236	32	Female.	Austrian.	Mitral reg.	Small contracted kidney.
237	57	Female.	American.	Arterial sclerosis.	Chronic interstitial nephritis.
238	75	Male.	English.	Mitral reg. and hypertrophy.	Contracted kidney.
239	19	Male.	American.	Arterial sclerosis.	Acute parenchymatous nephritis.
240	70	Female.	English.	Aortic sclerosis.	Chronic interstitial nephritis.
241	54	Female.	Irish.	Aortic stenosis.	Chronic interstitial nephritis.
242	59	Female.	American.	Mitral and aortic reg.	Chronic diffuse nephritis.
243	50	Female.	German.	Hypertrophy and dilatation.	Chronic interstitial nephritis.
244	50	Male.	American.	Mitral reg.	Chronic interstitial nephritis.
245	74	Male.	German.	Hypertrophy, aortic stenosis.	Acute hemorrhagic.
246	71	Male.	American.	Arterial sclerosis. Mitral reg.	Chronic diffuse nephritis.
247	52	Male.	American.	Chronic endocarditis.	Chronic interstitial nephritis.
248	32	Male.	Irish.	Chronic endocarditis.	Chronic diffuse nephritis.
249	19	Male.	Italian.	Chronic endocarditis.	Chronic diffuse nephritis.
250	52	Female.	American.	Hypertrophy, dilatation, arterial sclerosis.	Acute diffuse nephritis.
251	39	Male.	American.	Hypertrophy with arterial sclerosis.	Acute diffuse nephritis.
252	58	Male.	English.	Cardiac hypertrophy and endocarditis.	Cloudy swelling.
253	28	Female.	German.	Aortic atheroma.	Interstitial nephritis.
254	21	Male.	American.	Hypertrophy and dilatation	Parenchymatous changes.
255	79	Female.	American.	Acute mild carditis.	Chronic interstitial nephritis.
256	41	Male.	Italian.	Acute mild carditis.	Acute parenchymatous nephritis.
257	76	Male.	Italian.	Acute mild carditis.	Acute parenchymatous nephritis.
258	55	Male.	English.	Slight atheroma.	Chronic interstitial nephritis.
259	17	Male.	Italian.	Slight atheroma.	Acute parenchymatous nephritis.
260	20	Male.	American.	Slight atheroma.	Acute parenchymatous nephritis.
261	51	Male.	English.	Slight atheroma.	Acute nephritis.
262	36	Male.	American.	Acute pericarditis.	Acute nephritis.
263	46	Male	American.	Cardiac dilatation.	Chronic nephritis.
264	65	Female.	Irish.	Cardiac hypertrophy.	Interstitial nephritis.
265	43	Male.	English.	Pericarditis and arterial sclerosis.	Interstitial nephritis.
266	60	Female.	Irish.	Mitral endocarditis.	Interstitial nephritis.
267	81	Female.	Irish.	Valvular endocarditis.	Interstitial nephritis.
268	26	Male.	American.	Hydro pericardium.	Subacute nephritis.
269	70	Female.	American.	General atheroma.	Chronic interstitial nephritis.
270	43	Male.	American.	Endocarditis, mitral and aortic.	Chronic interstitial nephritis.
271	69	Female.	Irish.	Endocarditis, mitral and aortic.	Acute parenchymatous nephritis.
272	46	Male.	American.	Endocarditis, mitral and aortic.	Cloudy swelling.
273	1	Male.	American	Acute endocarditis.	Cloudy swelling.
274	67	Male.	German.	Chronic endocarditis.	Acute nephritis.
275	40	Male.	American.	Chronic endocarditis.	Chronic interstitial nephritis.

Diseases and conditions that are successfully treated by a correction of the mode of life are apt to be regarded as functional in nature, when, in reality, definite although undiscoverable structural lesions already exist, the foundation of an insidious and progressive disease already laid.

Now it is conceivable that a broader application of data as yielded by vital statistics would render more clearly recognizable the terrible significance of an enlightened public, living in idle acquiescence to positively injurious prevailing customs. A federation of forces, however, in connection with the investigation of special diseases even, is necessary to make this branch of inquiry productive of really important information; for example, the co-operation of committees on vital statistics with the creation of centers under the auspices of a national organization, such as the American Medical Association, would prove effective. I would instance lobar pneumonia, which, as before stated, is increasing in prevalence, as a disease in which the light of future investigation after this method of research would prove preliminary to important discoveries and decisions. Indeed, the local diversity in social conditions and climate in different sections which are far separated by geographical distances in this country, renders such a procedure an absolute necessity. The statistical data gathered by individuals, notable those of E. F. Wells, are of real value, and one point approximately settled is that the death rate by decades during eighty years is practically unaltered—"certainly not decreasing." The census for the decade between 1890 and 1900 shows an increased prevalence of this disease from 186 to 191 per 100,000.

A marked numerical increase in the number of cases of pneumonia has taken place since the advent of epidemic influenza,[1] but this does not account for the slowly rising incidence of the disease during previous non-epidemic seasons. Other reasons have been given for the augmenting prevalence of pneumonia: increased facilities for travel and the tendency for people to congregate (Wells), the highly infectious character of the disease and the neglect of prophylactic measures in crowded centers (Walsh). Among accessory causes of the increased prevalence of pneumonia may be mentioned a change in the prevailing meteorologic conditions. As shown elsewhere the wanton destruction of the native forests has been attended with an exaggeration in the range of variability of such meteorologic conditions as temperature and humidity. It has been long known and universally recognized that this disease bears a vital relation to the seasons, and that the greatest morbidity coincides with the most pronounced climatic changes. It is probable that the increased incidence of the disease will be shown to be dependent in part on augmenting prevalence of visceral degenerations, particularly of the cardio-vascular system and the kidneys. Be it remembered that in a large measure these are the direct or indirect result of an era characterized by undue devotion to business, social excesses and club life, with its attendant unseemly hours and unconcealed conviviality. It must be confessed that the extent to which lobar pneumonia is dependent on these degenerations acting as predisposing factors is imperfectly known, but it can not be doubted that a conservative attitude toward the question accords to them a prominent position among the agencies unfavorably affecting the prognosis, as shown by Table 1.

This table comprises all necropsied cases of lobar pneumonia at the Philadelphia Hospital for a period of 6 years, from Jan. 1, 1896, to March 1, 1903.[2] Out of a total of 275 cases, 250, or about 90.9 per cent., showed cardio-vascular lesions, principally chronic endocarditis and general atheroma of the vessels. A small number of the cases, 14, or 5 per cent., showed acute plastic pericarditis, and 11, or 4 per cent., chronic pericarditis. Renal lesions were recognized in 90.5 per cent. of the totality of cases. Chronic interstitial nephritis was noted in 145, or 52.7 per cent.; chronic parenchymatous nephritis in 50, or 18 per cent., and acute nephritis in 38, or 13.8 per cent. Among the remaining 25 cases was one of renal calculus, another of renal tuberculosis, and in many of the remainder subacute nephritis was noted.

These figures afford strong presumptive evidence that renal and cardiovascular degeneration rank as potent predisposing conditions, and clear and convincing proof that they bear a close and vital relation to the high mortality rate of lobar pneumonia. It should be stated that the patients admitted into the Philadelphia Hospital belong to the pauper element of society and the subjects are principally adults.

The reports of the health departments of leading cities, in particular that of New York, furnish valuable data from which important tentative influences may be drawn, but sure ground can result only from research work of a broader character than has yet been undertaken in this country. From the record of vital statistics of Philadelphia and New York I have compiled two tables (*vide infra* tables No. 2 and 3), which show that pneumonia is more or less limited to centers, and these correspond in the main to the most densely populated areas, with their allied conditions of squalor and poverty.

Pneumonia, like other acute infections that prevail epidemically, shows a wave-like character, on comparing different years for the same locality. Exclusive of epidemic outbreaks there is an evident tendency to a preponderating incidence in overcrowded districts, and among the impoverished classes. Thus the average mortality rate for four years in New York (*vide* Table 2), taking the eight wards which are most densely populated, from the tabular list is 18 per cent.

The fourth, sixth, seventh, tenth, eleventh, thirteenth, fourteenth and seventeenth wards of New York City were embraced in this estimation. In contrast with the figures just given, eight wards representing the most sparsely settled portions of the city of New York (e. g., first, fifth, eighth, ninth, fifteenth, sixteenth, eighteenth and nineteenth) gave for the same period of four years an average mortality of 14.3 per cent.[3] It was observed in the compilation of these mortality statistics that an elimination of the epidemic periods would make the differences in percentage dependent on the population somewhat greater.

In arranging the statistics for Philadelphia I have included only those wards in which the inhabitants were equally distributed throughout the entire ward. Per contra, wards having large area and a low population, per acre, but this population located in certain sections of the ward only, have not been included. Thus the following wards became available for the purpose of contrasting those giving the highest with others showing the lowest mortality: First, second, third, fourth, fifth, sixth, seventh, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, eighteenth,

TABLE II.

Ward.	Area in Acres.	Population U.S. Census of 1900.	Population per Acre.	Percentage of Deaths from Pneumonia.			
				1899	1900	1901	1902
First	154	9,516	62	11.2	11.8	10.9	12.1
Second	81	1,488	18	2.9	9.1	11.5	7.1
Third	95	1,797	19	10.3	9.6	12.9	10.5
Fourth	83	19,554	222	20.4	22.8	18.0	20.1
Fifth	168	8,298	49	12.1	15.3	15.5	12.6
Sixth	86	20,004	266	18.8	18.0	15.8	20.4
Seventh	198	89,237	451	16.9	17.5	16.0	17.1
Eighth	183	29,059	159	15.4	16.9	15.0	19.0
Ninth	322	59,650	185	13.1	15.3	13.4	12.9
Tenth	110	71,879	638	18.1	15.8	15.5	16.9
Eleventh	196	99,144	443	18.2	18.4	17.4	18.0
Twelfth	5,504	476,602	86	12.8	15.2	12.7	14.4
Thirteenth	107	64,117	550	21.6	23.7	18.3	21.3
Fourteenth	96	34,035	332	18.2	20.7	22.4	20.1
Fifteenth	198	24,066	122	14.1	21.4	14.0	18.6
Sixteenth	349	52,808	123	12.1	13.2	11.1	12.3
Seventeenth	331	130,796	395	13.8	17.3	13.7	17.2
Eighteenth	450	61,325	163	11.2	13.2	10.8	12.2
Nineteenth	1,481	257,448	174	12.0	16.7	14.4	11.4
Twentieth	444	89,798	202	13.7	13.0	12.3	11.9
Twenty-first	411	60,211	147	12.9	16.4	12.9	13.6
Twenty-second	1,529	189,261	124	13.7	14.5	12.0	12.8
Average percentage.	......	....	....	13.9	16.0	13.8	14.4

TABLE III.

Ward.	Area in Acres.	Population for 1900.	Population per Acre.	Percentage of Deaths from Pneumonia.		
				1899.	1900.	1901.
First	448.0	37,919	85.0	8.92	12.93	10.16
Second	282.8	35,206	128.0	14.10	17.75	14.52
Third	122.2	24,693	202.0	14.46	17.93	17.80
Fourth	146.6	22,562	154.0	11.37	16.69	18.09
Fifth	215.4	16,868	78.0	10.46	11.81	11.96
Sixth	215.4	8,042	37.0	9.86	19.57	13.12
Seventh	281.0	28,137	100.0	13.10	13.92	13.05
Eighth	278.4	15,757	55.0	10.21	17.25	9.65
Ninth	256.0	6,953	27.0	6.21	11.90	8.64
Tenth	229.8	19,967	86.0	8.47	10.84	12.29
Eleventh	134.4	11,843	88.0	13.89	10.46	8.00
Twelfth	113.5	13,850	122.0	7.79	10.75	7.42
Thirteenth	165.8	17,427	105.0	6.61	15.69	7.75
Fourteenth	151.7	19,405	121.0	7.51	10.81	8.04
Fifteenth	771.4	50,379	65.0	12.59	12.73	10.14
Sixteenth	179.8	15,788	88.0	7.82	8.74	11.29
Seventeenth	160.6	17.908	111.0	9.80	10.09	12.09
Eighteenth	416.0	29,643	71.0	10.29	11.18	9.56
Nineteenth	446.7	55.246	121.0	10.63	11.65	9.46
Twentieth	469.8	43.276	92.0	8.33	11.15	11.79
Twenty-first	4,562.6	32,168	6.0	10.28	13.71	10.96
Twenty-second	12,738.6	64.832	4.0	8.97	12.39	10.76
Twenty-third	2,051.2	26,109	12.0	10.39	8.86	9.50
Twenty fourth	2,656.0	53,023	20.0	7.37	8.70	10.93
Twenty-fifth	2,640.6	51,723	20.0	12.53	12.97	11.56
Twenty-sixth	896.0	45,615	51.0	10.63	12.96	10.45
Twenty-seventh	2,308.2	28.004	12.0	*	*	*
Twenty-eighth	655.4	43,931	67.0	8.10	7.82	10.33
Twenty-ninth	896.0	60.096	67.0	13.49	11.11	9.71
Thirtieth	332.2	28,874	87.0	9.32	12.79	10.86
Thirty-first	456.3	33,139	73.0	10.07	11.61	10.90
Thirty-second	517.8	39,889	77.0	9.76	9.47	9.11
Thirty third	2,844.2	65,372	23.0	10.27	12.86	11.64
Thirty-fourth	3,568.0	43,706	12.0	10.63	12.46	9.01
Thirty-fifth	21,287.0	8,614	0.4	7.25	9.36	10.37
Thirty sixth	3,891.8	46,811	12.0	10.28	13.43	11.93
Thirty-seventh	332.8	22,445	67.0	12.89	11.03	13.12
Thirty-eighth	255.4	33,104	128.0	9.21	9.29	9.47
Thirty-ninth	3,077.8	40,377	13.0	10.59	11.75	11.87
Fortieth	5,177.0	19.438	4.0	6.68	9.42	10.09
Forty-first	400.0	11.328	28.0	......	7.69	4.57

* Population and deaths occurring in Almshouse (Twenty-seventh Ward) do not appear in this table. Deaths in Almshouse, 1,637.

Forty-one (41) per cent. of deaths from pneumonia occurred after the age of 40 years.

nineteenth, twentieth, twenty-eighth, twenty-ninth, thirtieth, thirty-first, thirty-second and thirty-seventh.[1] The eighth ward was not included on account of being inhabited principally by a better-to-do class and on account of containing the Pennsylvania Hospital, the former condition lessening the liability of pneumonia, while the latter institution named would tend to increase the mortality from this disease since many of its patients come from the third, fourth, fifth and sixth wards. The portion of the city west of the Schuylkill River was excluded from this computation for similar reasons.

Out of the 25 wards included in our figures I have estimated a percentage of deaths from those showing the most dense population per acre, allowing for the location of hospitals, homes, etc. (e. g., second, third, fourth, seventh, thirteenth, seventeenth and nineteenth wards), and I find the percentage of deaths from pneumonia to be 12.8 per cent. Those wards showing less dense population, the first, ninth, tenth, sixteenth, twenty-eighth and thirty-second, gave an average of 9.5 per cent.

The second, third and fourth wards were occupied largely by foreigners (Italians, Russians) and showed the highest percentage of deaths from pneumonia, while the seventh ward, which contains a large colored population, also shows a very high death rate.[5]

As shown by MacDougall's statistics, unfavorable occupational conditions probably have less effect in causing pneumonia than phthisis. In my own investigations it was observed that divisions of Philadelphia having an industrial population modestly though comfortably housed furnished a death rate but little in excess of that of the sections inhabited by the well-to-do. The whole subject of occupational diseases, eminently important to the medical world, is closely united with the social and economic conditions of the wage-earning classes, but its consideration here would lead me too far a-field.

REFERENCES.

1. Phila. Hospital Reports, vol. 14, p. 57, 1896, by the writer.

2. For permission to examine and employ the records of this hospital, the writer is indebted to Dr. J. V. Shoemaker, president of the Board of Charities and Corrections.

3. The writer desires to acknowledge, with thanks, the kind aid of Dr. William H. Guilfoy, registrar Department of Health, N. Y., in furnishing data for the above table.

4. The following wards have not been included in the estimation of the lowest percentages for the following reasons: The Twelfth Ward, while it shows a low population per acre (86), has a number of hospitals and homes which contribute largely towards its high death rate from pneumonia. The Second and Third Wards show a population of 18 and 19 per acre; there are but few children under 5 years and few aged persons living in these wards, and this lessens the mortality from pneumonia. The Twenty-first and Twenty-second wards, because they are occupied mostly by the well-to-do classes. The Fifteenth, while it has been included in my calculation, contains a large colored, Italian and French population.

5. My acknowledgments are here due to Dr. L. Napoleon Boston for assistance rendered in connection with the statistics gathered in Philadelphia.

Eye Affections in Egypt.—Baudry, professor of opthalmology at Lille, on his recent visit to the Egyptian Medical Congress, made a special study of the endemic eye affections, for which the country is notorious. He reports in the "Nord Méd." of January 15 that the ocular lesions there are the same as elsewhere and that there is no special morbid entity peculiar to the country. The famous Egyptian ophthalmia is merely trachoma complicated by a catarrhal or purulent condition of the conjunctivæ, and does not differ from such conditions anywhere. The climatic and hygienic conditions of the country explain the prevalence of eye affections and the frequency of contagion. Some ideas of hygiene have already percolated among the masses and the number of cases of trachoma has materially diminished of late years.

Preliminary Note.

DIAGNOSTIC VALUE OF BLOOD PRESSURE DETERMINATIONS IN THE DIAGNOSIS OF TYPHOID PERFORATION.

GEORGE W. CRILE, M.D.
CLEVELAND, OHIO.

The highest systolic pressure in uncomplicated cases, and with normal arteries, as measured by a Riva-Rocci sphygmomanometer in 115 cases of typhoid, was 138 mm. mercury; the lowest, 74 mm.; the mean in the first week was 115; the second, 106; the third, 102; the fourth, 96; the fifth, 98.

In 20 cases of acute peritonitis, recorded by the same observer with the same instrument in otherwise similar cases, the highest systolic pressure was 208 mm. mercury; the lowest, 156; the mean, 166 mm. The mean pressure of all the typhoid was 104 mm.

In 5 cases diagnosed typhoid perforation, in which blood pressure determinations were made, 4 were verified either by operation or autopsy. The case not operated on was a typical one. The pressure rose from 116 mm. to 190 mm. during four hours. The second case, a lad of 12, was admitted to Lakeside Hospital in general peritonitis. Blood pressure was 105; Widal reaction was positive. Immediate operation was performed and a perforation found. Later the abdominal symptoms of peritonitis disappeared. The blood pressure fell to 80 mm. On the eighth day infection passed through the thinned wall of another ulcer, causing peritonitis; blood pressure then rose promptly from 84 mm. to 110 mm.

In the third case, a patient in the ward at Lakeside, developed a slowly forming perforation, blood pressure rose from 116 mm. to 165 within two hours. The pulse in the meantime had but slightly increased. At operation a small perforation and diffuse peritonitis were found.

The fourth case, that of a physician who entered Lakeside with general peritonitis, blood pressure was 165; no operation. Autopsy revealed perforation and diffuse peritonitis.

The fifth case was one of typical perforation, blood pressure 208 mm. At operation perforation and diffuse peritonitis were found.

The blood pressure in the perforation cases assumed the high level attending peritonitis from other causes.

The Lay Press as Physicians' Censors.

A new method of restraining the physician who is anxious for newspaper fame has been discovered. The Indian Territory Press Association, in session at Muscogee April 25, discussed the proposition of excluding from their newspapers the names of physicians who consider it contrary to the ethics of the profession to advertise and pay for the same, but who are willing or desirous of having their names mentioned in connection with operations, interesting cases, etc. We regret to learn that the resolution to take this action was finally voted down, having, however, excited a warm dispute. The Indian Territory Press Association is on the right track; the measure ought to pass, not only there, but elsewhere. The press has here far more power than the medical societies can exert. Such a measure would relieve from temptation many an erring physician and from anxiety many a grieved observer.

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THE INVESTIGATING FORCE AT THE ROCKEFELLER INSTITUTE.

In a previous number of The Journal we ventured to comment on the drawings of plans for the buildings projected by the Rockefeller Institute for Medical Research. Of much greater importance, however, for the success of the institute is the policy which will be adopted in the selection of the investigative force which will work there. Mistakes with regard to the construction of buildings would be deplorable; serious errors in judgment in the choice of the men who are to undertake the scientific research of the institution, or in the organization of the staff, might prove fatal to its welfare. In this connection there are one or two points to which we desire to call attention.

We approve, and we believe that there is general approval, of the choice of a scientific director made by the board of directors. Dr. Flexner seems to us to be the logical man for the place. But we shall be, and we believe others will be, deeply interested in the method which is followed in the appointment of the investigating force as a whole.

Either one of two plans may be adopted. It may be decided that the institute shall be developed as a unit centering in the personality of the scientific director, whose province it will be to determine the problems to be undertaken and the methods by which their solution is to be approached; in this event the members of the staff would consist of a group of men, skilled in diverse directions, whose functions it would be to follow the leadership of the director, at least in a general way. This is the kind of organization that obtains, so far as we can learn, in the Institute for Experimental Therapy in Frankfort, over which Paul Ehrlich presides with success. The other plan which might be chosen would be that in which the scientific director, with the sanction of the board, selects a number of eminent men, each to have autonomous charge of a department of work in the institute, say one in physiologic chemistry, one in physiologic physics, one in experimental therapy, one in experimental surgery, one in the field of enzymes, etc., the scientific director to have charge of one of the departments himself and to stand in much the same relation to the men in charge of the other departments that the president of a modern university stands to the heads of departments in the university. This second plan of organization corresponds in the main to that adopted in the Pasteur Institute in Paris.

While each of the two modes of organization may lead to successful results, it appears to us that the second possesses many advantages over the first. For, in the first plan, it might be exceedingly difficult for the director to secure appointees who would approach the level of his own mental caliber; there would be danger that the staff would be made up, very largely at any rate, of assistant natures, lacking in power of original thought and initiative; indeed, the success of this plan would be in large part dependent on the willingness of the staff to faithfully carry out the ideas and instructions of the director and to stifle their own tendencies to tangential excursions and suppress their own ideas regarding the overcoming of obstacles when these were opposed to the director's plans. Conditions such as these, while important and desirable for the aspiring scientist in his period of pupillage, are insufferable when that period has been passed. The second plan, on the other hand, permits of a much broader development, and it is, of course, the much more costly plan of the two. Here each head of a department may be a man of mental powers equivalent to or in many ways even superior to those of the director; the research along each of various lines may be guided by an expert; younger men undertaking investigations may begin under conditions of pupillage and be gradually led into positions of ever-increasing independence; the occupants of the higher positions have all the advantages of companionship and consultation with their colleagues of allied subjects with none of the restraints or limitations which a rigid monarchial organization imposes. The scientific director must, it is true, in this instance, be a man of large personality, of wide sympathies, above petty jealousies, and more interested in the advance of medical science than anxious for the recognition and forwarding of his own reputation. It is only this kind of a man who is not afraid to have strong men near him.

It seems probable that the Rockefeller Institute for Medical Research will not be compelled, for financial reasons, to adopt any mode of development other than the best. The Journal hopes that when a decision regarding details of organization has been reached it will be found that a scheme has been devised which will bring together an active group of skilled investigators and which will combine all the advantages of concentrated effort with the greatest possible opportunity for individual freedom of thought and experimentation.

REMARKABLE PROPERTIES OF RADIUM.

Though only discovered in 1898, the new metal, radium, bids fair to set the physical-chemical world agog. The prospect of securing energy for nothing has stimulated the imagination of a certain number of human beings from time immemorial, but the nearest approach to the mythical "perpetual motion" thus far made would seem to be that presented by the phenomena manifested by radium and its salts. It was startling enough to be told that radium can give out light continuously

THE SO CALLED "KOCH LUNG CURE" FRAUDS

The magazine *Physical Culture* has published a very interesting expose of the different so-called Koch lung-cure institutes and sanitaria, which are pretending to be connected with the famous Berlin scientist. The exposure is certainly a complete one and should go a long way to prevent this sort of quackery and imposition on the public. This magazine, while we can not endorse it in all of its contents, is doing excellent work in this particular and we hope that it will keep on and do still more. There is a large field for this kind of work and they seem to have the author in Mr. Gerald Keating, who knows how to do it well.

DEFEAT OF EDDYISM IN PENNSYLVANIA

Sometime since, as the readers of The Journal are aware, a charter was refused to the Eddyite organization in Philadelphia by a Pennsylvania judge on the ground that it was a corporation for profit and against public policy. The case has been carried to the Supreme Court and a decision just received. The findings of the lower court are confirmed. The Supreme Court holds that the state regulates the practice of medicine and requires certain qualifications in its practitioners. While faith and prayer may be of use, common sense as well as public policy demands that other measures be taken in certain cases. The decision fixes the status, or rather the non-status of Eddyism in Pennsylvania; as a healing cult it has no standing whatever, for which fact the citizens of that commonwealth are to be congratulated.

THE W. C. T. U. AND PATENT MEDICINES

We have occasionally seen in our contemporaries criticisms of the W. C. T. U. for not fighting the drink evil along the line of patent medicines. The charges have been made that leaders of the said body have been induced to endorse for popular use some strongly alcoholic preparations, alleged to be of a medicinal nature. In a recent communication to the *Dietetic and Hygienic Gazette* for May, Mrs. Martha M. Allen, who has charge of the W. C. T. U. work in this particular line, shows that they have not been inactive in this particular, but have carefully obtained official analyses of large numbers of patent medicines and distributed pamphlets and books exposing them to such an extent that they have been threatened with legal proceedings on the part of the manufacturers. These threats, of course, were futile, in view of the fact that the analyses given were made by state officers and published as such. In 1898 the Woman's Christian Temperance Union, with the assistance of the editors of several high-grade pharmaceutical journals, issued a pamphlet entitled "The Dangers and Harmfulness of Patent Medicines," thousands of copies of which were distributed. The work is still being continued along this line. It is not surprising that unsuspecting reformers should sometimes be misled to give their names to what they would not with full knowledge have endorsed, and we can not accuse them of anything more than a lack of consideration. It is simply a matter of unsuspicious ignorance. This is the reason why we have so many clergymen and other good people endorsing patent medicines, and we believe that no one would be more sorry than they for any evil they may have thus unwittingly aided. The question might be asked whether we as physicians always do our duty in regard to informing patients who may be misled as to these nostrums. It is satisfactory, however, to know that an organization which has been charged with neglecting this matter has by no means been guilty of such negligence, but has been an active factor in the publication of the dangers of alcoholic patent medicine dosing.

ANOTHER GOVERNOR'S VETO

Some time ago we had occasion to notice what seemed to us a very poorly advised veto of a medical practice act by the then governor of Colorado, and we commented rather plainly on the reasons given in the veto message. They have changed governors in Colorado since that time, but unfortunately the precedent seems to have been set that is slavishly followed. The last medical act which recently passed the house and senate and was supported by the medical profession in the state has also been vetoed by the governor. It was not a radical measure; in some respects we think it might have been better by having been made more radical, but it seemed to be altogether too much so for the administration. The governor's ideas on the subject are rather curious. He remarks that reliable statistics show that the death rate of Colorado is as low as it ever has been, therefore medical matters are just where they ought to be and the proposed law was useless and likely to make things worse. He says, guided by the late experience of similar legislation in other states, the conclusion is irresistible that "all such legislation has a tendency to restrict the citizen in the employment of whomsoever he pleases in the treatment of his diseases," and goes on further to say that it will build up a medical trust made up of certain schools, to the exclusion of others equally meritorious, including among the latter, we presume, faith healers, osteopaths, Dowieites, Eddyites, *et id omne genus*. The statistical method of showing the expense to a community from evil is a popular one, and we wish that some one would get up the statistics of the money spent in Colorado on this class of practitioners, especially adding the amount given to itinerant frauds who go through the country and rob the innocent and confiding public of the state. We believe a true statement of things would be a little appalling to the governor who is so fond of letting the individual employ whomsoever he pleases unrestricted. The Colorado contributions to quacks, frauds and pretenders thus favored by the governor will, we presume, go on and grow until the time may come when a little common sense will penetrate the executive cranium and allow a reasonable medical practice act to go into force. There are just as good arguments in favor of the itinerant gambler, if every citizen has a right to lose his money in the way he pleases, as there are in favor of the irregulars championed by the governor of Colorado. The common sense to be found in the message of Governor Wells of Utah,[1] accompanying his veto of the osteopathic bill, is in happy contrast.

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[1] The Journal A. M. A., April 25, p. 1156.

VACCINATION AND SMALLPOX.

As was told in The Journal last week, in our special telegraphic report from Boston, the etiology of smallpox is now known through the work of Drs. W. T. Councilman, Geo. B. McGrath and W. R. Brinckenhoff. It is a sporozoon first suggested by Guarnieri as the cause of variola and named by him *Cytoryctes vacciniæ*. On Monday evening, at another large meeting of medical men, at the Boston Medical Library (soon to be the Academy of Medicine), Dr. E. E. Tyzzer described his elaborate work on the organism of vaccinia, performed during the spring and summer of last year. Experiments were made by inoculating rabbits' corneas with vaccine virus and with the contents of the pustules of variola. Microphotographs showed every stage of the asexual cycle of *Cytoryctes vacciniæ* in the cases in which virus was inoculated, the sporozoa appearing in sixteen hours in the epithelial cells, and every cell containing them by the end of the third day. Dr. Tyzzer, like Dr. Councilman, is sure that the organism of the two diseases, vaccinia and variola, is identical, the two results differing for the reasons described above. This elaborate research brought to so successful a result appears as a model of no little significance for those who would accomplish results of real scientific worth. It illustrates, as few recent discoveries illustrate, the benefit to be derived from systematic and co-ordinated endeavor, under the guidance of a wisdom which is always more than mere learning. Several factors combined to the result. First, there was an epidemic of smallpox; second, a city board of health, imbued with the true scientific spirit, gave the widest possible privilege and opportunity for the collection of pathologic material; third, an adequate directing mind; fourth, a number of younger men who knew neither fatigue nor fear in pursuit of the common good; fifth, adequate financial means, and sixth, pervading all, the tireless energy which kept and which still keeps, for future further gains, the research up in all its laborious and infinite detail. These fruitful elements should be present to-day in every large city of the land—disease, a board of health, some earnest medical scientists, money from some one of the great funds now available and the energy of discovery. Combining these factors, why should not some other unsolved problems be compelled to give up their hidden solutions?

Medical News.

ILLINOIS.

Chicago.

Personal.—Dr. Albert H. Hoy and family have returned from California.——Dr. Frederick Mueller gave a dinner, April 28, in honor of Dr. Adolf Lorenz.

Heavy April Mortality.—During April 2,628 deaths were reported, equivalent to an annual death rate of 16.96 per 1,000. Not since the year following the great fire has there been such a prevalence of the graver diseases.

Women Want Hospital.—At the meeting of the alumnæ of the Woman's Medical College it was proposed by Dr. Mary Coons that a hospital for women, to cost $500,000, be erected near Jackson Park. A committee of five was appointed to report on a plan for the enterprise.

Deaths of the Week.—During the week ended May 2, 637 ths were reported, an annual mortality per 1,000 of 17.62. umonia again heads the list with 167 deaths; consumption comes next with 65; violence and heart disease follow, each with 39. Nervous diseases caused 38 deaths; measles 28, whooping cough 5, scarlet fever 4 and smallpox 2.

How Not to Lose Diphtheria Patients.—The department of health, in its latest bulletin, makes the following statements regarding diphtheria:

> There are numerous physicians who treat yearly a large number of diphtheria cases who have not lost a patient from this disease for years. Their inflexible rule is to take a culture at the first visit and to administer antitoxin at once when the diphtheria bacilli are found.
>
> For a physician to treat a patient with an acute inflammation of the throat for days without a microscopic examination is little short of criminal neglect. The essentials in the treatment of diphtheria are an early diagnosis and the prompt administration of antitoxin. Physicians who are prepared in these essentials are seldom called on to give a death certificate.

The Captain of the Men of Death.—Under this title the department of health characterizes pneumonia:

> Pneumonia remains as the opprobrium of the medical profession. Its treatment, notwithstanding more than one vaunted antipneumococcic serum, is as unsatisfactory as ever, while its increasing ravages make all other acute infectious diseases relatively insignificant.
>
> The commissioner calls attention to the fact that of the total of 2,628 deaths in April, 604 were caused by pneumonia and only 283 by tuberculosis. This is an excess of 113.4 per cent. of pneumonia deaths over consumption deaths, and, while the deaths from consumption have increased 30.4 per cent. in actual numbers over those of April, 1902, the deaths from pneumonia have increased 11.1 per cent. this April over last.

The department repeats its warning to physicians and those in charge of the sick, urging the combating of the spread of the disease by cleanliness, ventilation, etc.

MARYLAND.

Baltimore Vital Statistics.—Two new cases of smallpox were reported last week and 36 of diphtheria. Among the deaths consumption led with 34, pneumonia and Bright's disease following with 16 each.

Medical Banquets.—The annual banquet of the Alumni Association of the College of Physicians and Surgeons was held April 27. Prof. William Royal Stokes was toastmaster. The menu was written in prescription form, the courses being all in Latin.——The sixth annual banquet of the Baltimore County Medical Association will be held in Baltimore, May 13.

Personal.—Dr. Norman M. Harris, associate professor of bacteriology in the Johns Hopkins Medical School, Baltimore, has accepted the position of first assistant in bacteriology at the University of Chicago.——Dr. George Warner Miltenberger, Baltimore, has recovered from the operation done on him several weeks ago at the Union Protestant Infirmary.——Dr. Frank Oldham Miller has completed his term as resident physician in Bay View Asylum, Baltimore, and is now settled in practice at Uniontown.

P. and S. Commencement.—At the commencement of the College of Physicians and Surgeons, Baltimore, April 30, 76 out of 79 candidates for the degree received diplomas. The first gold medal was awarded to Dr. Samuel T. Darling, Maryland; the second to Dr. T. J. Cummings, New Jersey; the third to Dr. F. W. A. Mayer, New Jersey, and the fourth to Dr. W. S. Evans, Utah. The following received honorable mention: Drs. George E. Merrick, Pa.; Frank H. Cutler, Utah; George L. Fawcett, Ala.; A. W. Deal, Pa.; T. J. Brothers, Ala., and E. H. Cohoon, Nova Scotia. Appointments were announced as follows: Dr. L. J. Owen, resident physician, City Hospital, with Dr. Z. P. Henry, and S. L. Page, associates, and Drs. W. S. Evans, A. W. Deal, A. C. Biddle, Major M. Allen, and C. W. Lurking, assistants. Dr. T. J. Cummings was made assistant to Dr. N. G. Keirle of the Pasteur Institute, and Dr. Samuel T. Darling was appointed resident pathologist. Drs. Wright S. Sudler, A. Ferdinand Ries and George F. Sargent were appointed resident physicians at Bay View Asylum. Drs. C. G. Laslie and J. Plummer Cole were appointed resident physicians at the Maternité Hospital.

MASSACHUSETTS.

War Against Mosquitoes.—The mosquito war is on in Brookline, where $1,000 will be expended this year in "petrolizing" pools, catch-basins, etc. Worcester will spend $3,000 and Fairhaven $300 for the same purpose.

Smallpox in Adams.—An advanced case of smallpox was discovered at Adams, May 1, and the 650 children in the public schools were promptly vaccinated, as the patient had undoubtedly exposed a number of children living in the house.

Marathon Racers' Hearts.—The eight physicians who examined the Marathon runners before and after their twentymile race, April 19, have reported no unusual findings except that the two cases of severe exhaustion noted were due to the unwise use of alcohol.

Hospitals Benefit.—By the will of John W. Shapleigh of Brookline, the Free Hospital for Women, the New England Deaconesses' Home and Training School Hospital will largely benefit, the amount being a proportionate part of a trust fund left to his wife and daughter.

Personal.—Prof. O. T. Wadsworth has resigned the chair of ophthalmology at Harvard Medical School.——Arthur I. Kendall, Ph.D., will work, as fellow of the Rockefeller Institute for Medical Research, this summer on the Boston Floating Hospital, under the supervision of Dr. Simon Flexner, in his study of the Shiga bacillus and the serum treatment of infantile diarrhea.

For a Control of Tuberculosis.—Thirty-five hundred cases of tuberculosis reported to the board of health of Boston in the last three years has aroused the public interest, and the Boston Association for the Relief and Control of Tuberculosis has been formed, with Dr. Edward O. Otis, president, Dr. Arthur K. Stone, vice-president, Miss Alice L. Higgins, secretary; George S. Mumford, treasurer, and a strong executive committee. The organization seeks to educate the people in treatment and in prophylaxis.

More of Councilman.—The Medical Library meeting of May 4 was a fuller exposition of the studies of Dr. Councilman and his associates of smallpox. Dr. Ralph L. Thompson presented a full statement of his new methods for determining the bacteriolytic complement content of the blood serum, which he has most carefully worked out in variola in his research, under the auspices of the Rockefeller Institute. This is undoubtedly a great step forward in the revelation of an index of the vitality of a patient and, hence, the progress of his disease. Dr. E. E. Tyzzer told of his studies of vaccinia, and Dr. William T. Councilman again demonstrated and described his discovery, the protozoon of smallpox.

NEW JERSEY.

Physician Wins Suit.—The case of Hiram J. Shoemaker against Dr. Henry W. Elmer, Bridgeton, for alleged wrongful treatment of an injured shoulder, was decided in favor of the defendant.

Osteopath Bill Fails of Passage.—A bill to establish a board of examiners in osteopathy who would have power to examine and license persons to practice osteopathy in the state, met the determined opposition of the legislative committee of the Medical Society of New Jersey, and was strangled in the senate committee.

The Legislature's Good Record.—The legislature which has just adjourned has left a good record behind it in general and, so far as medical legislation, has done particularly well. A bill was passed granting $200,000 to the State Sanatorium for Tuberculosis, a site for which has already been secured in Hunterdon County. The erection of the buildings will be pushed with all possible dispatch, under the architectural direction of George B. Post of New York City.

New Requirements for Medical Licenses.—The State Board of Medical Examiners announce that after July 4 the following changes in the requirements for a New Jersey license will go into effect:

1. The date of examination will be the third Tuesday and Wednesday in June and October.
2. The academic requirements will be a certificate or diploma, issued after four years of study, either in a normal, manual training or high school of the first grade in this state, or in a legally constituted academy, seminary or institute of equal grade, or a student's certificate of examination for admission to the freshman class of a reputable literary college or an academic education considered and accepted by the state superintendent of public instruction as fully equivalent.
3. The medical requirements will be four full school years of medical study of at least nine months each, including four satisfactory courses of lectures of at least seven months, in four different calendar years, in a legally incorporated medical college or colleges, prior to receiving the degree of doctor of medicine.

NEW YORK.

Insane Hospital Improvements.—The bill introduced by Mr. Rogers, appropriating $1,070,000 for improvements to the state hospitals for the insane, has been passed by the legislature.

Filtration Plant Completed.—The filtration plant for the water supply of Cornell campus at Ithaca is completed and the water was turned into the main. This is the plant for which Andrew Carnegie has paid.

Presentation to Dr. Knight.—On the occasion of his seventieth birthday anniversary, Dr. Charles Calvin Knight invited the members of the medical staff of the Peekskill Hospital and their wives to dine with him. His guests surprised Dr. Knight by presenting him with a magnificent silver punch bowl and ladle.

For Consumptive Camp.—The assembly, on April 21, failed to pass the Goodsell-Bedell bill, requiring the consent of county and town authorities for a camp for consumptives. The bill, while of a general nature, was intended to prevent the establishment of a hospital camp for New York City consumptives at Central Valley, Orange County.

Lectures to State Alienists.—Dr. Adolf Meyer, director of the Pathological Institute of the New York State Hospitals on Ward's Island, has finished the third course of instruction to the physicians of the fourteen state hospitals. These three courses of lectures and clinics have been given by himself and his assistants at Ward's Island during the past winter. In all, 61 physicians belonging to the staffs of the state hospitals at Buffalo, Utica, Gowanda, Middletown, Rochester, Ogdensburg, Poughkeepsie, Brooklyn, Central Islip, Kings Park, Matteawan, Dannemora and New York City have been in attendance.

Application Against Raybrook Denied.—The attorney general has refused to order proceedings to declare void the purchase of the lands at Raybrook, Essex County, as a site for a state consumption hospital. The basis of the opposition to the purchase is that it is contrary to the constitution, which provides that forest preserve lands shall be forever kept as a wild forest. The attorney general holds that the power to locate the institution involved a decision by the governor and that the constitution did not prohibit the location of the hospital on the lands in question and that the selection of the site, being an executive function, the courts would not presume to review its correctness.

New York City.

Bequests to Hospitals.—By the will of Adolph Openhym, $5,000 is left to the Mount Sinai Hospital and $5,000 to the Montefiore Home for Chronic Invalids.

No quarantine against Cuba will be enforced unless yellow fever appears at Cuban ports. This announcement has already been made as regards Florida and Louisiana.

Awarded Fifteen Per Cent.—In the suit for $25,250 brought by Dr. John B. Acken against the estate of the late William R. Clarkson, the jury returned a verdict for $400.

Found Guilty of Manslaughter.—Convicted by a jury of being responsible for the death last September of Miss Agnes Lynch, Dr. Henry C. Hibbe, a physio-medical practitioner, was found guilty of manslaughter in the first degree, April 18. A sentence of twenty years' imprisonment may be imposed.

Buffalo.

Commencement.—The medical department of the University of Buffalo held its fifty-seventh annual commencement May 6. Degrees were conferred on 40. The alumni association held its annual meeting on the same day, at which the classes of '53, '63, '73, '83 and '93 held reunions. At the afternoon session Dr. William T. Sedgwick, professor of sanitary science in the Massachusetts Institute of Technology, Boston, presented the subject of protection of the public health by the filtration of water supplies, illustrated by stereopticon. A banquet was held at the Iroquois in the evening.

Personal.—Dr. William G. Taylor has been appointed to the medical staff in the children's department of the St. Mary's Infant Asylum.——Dr. William C. Krauss has been reappointed a member of the board of visitation for the Buffalo State Hospital.——Dr. Montgomery A. Crockett, who has been at Pinehurst convalescing from a severe illness, has returned to Buffalo and resumed his practice.——Drs. Hibbert Roberts, Edwin A. Riesenfeld, W. S. Goodale and Albert J. Harris have been appointed resident physicians at the German Hospital.——Dr. F. J. Carr will spend several months in Europe.——Dr. William J. Bissell, major of the Seventy-fourth regiment, and Dr. Frederick Busch, of the Sixty-fifth regiment, have been appointed medical officers of the New York State Provisional regiment, which escorted Governor Odell to the dedicatory exercises of the Louisiana Purchase Exposition at St. Louis.

GENERAL.

Professor Hans Kehr, the famous surgeon of Halberstadt, Germany, has come to the United States, it is said, at the

Charles C. Reed, Lincoln, treasurer, and Dr. James Lowrie, Lincoln, delegate to the Illinois State Medical Society.

State Society of Iowa Medical Women.—The medical women of Iowa met in annual session at Sioux City, April 14 and 15, and elected the following officers: Dr. Jennie McCowen, Davenport, president; Drs. Kate A. Mason-Hogle, Mount Vernon, and Lenna L. Meanes, Des Moines, vice-presidents; Dr. Anna Burnett, Mount Pleasant, secretary, and Dr. Agnes Eichelberger, Sioux City, treasurer.

Washington County (Ark.) Medical Society.—At the annual meeting in Fayetteville, April 14, the following officers were elected: Dr. William B. Welch, Fayetteville, president; Drs. John Young, Springdale, and E. G. McCormick, vice-presidents; Dr. Charles M. Robinson, Dutch Mills, secretary; Dr. Robert R. Dinwiddie, Fayetteville, librarian, and Dr. Frank B. Young, Springdale, delegate to Arkansas Medical Society.

Rock Island County (Ill.) Medical Society.—At the annual meeting in Rock Island, April 14, the following officers were elected: Dr. William R. Freek, Cordova, president; Drs. Charles C. Carter, Rock Island, and Lewis D. Dunn, Moline, vice-presidents; Dr. Thomas J. Lamping, Moline, secretary; Dr. Louis Ostrom, Jr., Rock Island, treasurer; Dr. George L. Eyster, Rock Island, official reporter, and Dr. Albert M. Beal, Moline, delegate to the Illinois State Medical Society.

Lewis County (N. Y.) Medical Association.—At the annual meeting held in Lowville, April 13, Dr. Alexander H. Crosby, Lowville, was elected president; Dr. George H. Littlefield, Glenfield, vice-president; Dr. Leroy W. King, Lowville, secretary; Dr. Charles E. Douglass, Lowville, treasurer. Dr. Alex. H. Crosby was chosen member of the nominating committee of the First District Branch of the New York State Medical Association. As fellow to the New York State Medical Association Dr. Charles E. Douglass was chosen; alternate, Dr. Ira D. Spencer, Croghan.

Northwestern Wisconsin Medical Association.—At the annual meeting, held at Stevens Point, April 14, the following officers were elected: President, Dr. Douglas L. Sauerhering, Wausau; vice-presidents, Drs. Karl W. Doege, Marshfield, Levi H. Pelton, Waupaca, and Frank A. Southwick, Stevens Point; secretary and treasurer, Dr. Carl von Neupert, Jr., Stevens Point, and censor for three years, Dr. William W. Gregory, Stevens Point. Hereafter, this association will constitute a district of the Wisconsin State Medical Society, and will comprise Portage, Waupaca, Waushara, Clark, Marathon and Wood counties. Quarterly meetings will be held at Waupaca in July, at Wausau in October, at Grand Rapids in January, and the next annual meeting at Stevens Point in April, 1904.

Kentucky State Medical Society.—At the annual meeting held in Louisville, April 22, 23 and 24, 424 members were registered. It was reported that the membership of the society exceeded 1,600. Lexington was selected as the meeting place for 1904. The following officers were elected: President, Dr. Steele Bailey, Stanford (secretary for 18 years); vice-presidents, Drs. John F. Reynolds, Mount Sterling, Milton P. Creel, Central City, and Frank P. Strickler, Elizabethtown; secretary, Dr. James B. Bullitt, Louisville (for five years); treasurer, Dr. William B. McClure, Lexington; orator in medicine, Dr. Joseph B. Marvin, Louisville; orator in surgery, Dr. Philip H. Stewart, Paducah, and delegates to the American Medical Association, Drs. J. N. McCormack, Bowling Green; Ap Morgan Vance, Louisville, and Isaac A. Shirley, Winchester.

FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

Held in Madrid, Spain, April 23-30, 1903.

President Julian Calleja y Sanchez presiding.

[By Cablegram from Our Special Correspondent.]

[Continued from page 1231.]

MADRID, April 30, 1903.

Fuller reports have been mailed.

Section on Medicine.

Professor Lorand, Carlsbad, in a paper on "Diabetes, Acromegaly and Basedow's Disease," spoke of their related pathogenesis. Diseases of the vascular glands are often associated with the glycosuria of Basedow, and glycosuria is invariably associated with hyperactivity of the thyroid body as in chlorosis, poisonings, lactourea and pregnancy. Thyroidin produces it. Marasmus, myxedema and hereditary syphilis are never associated with glycosuria. True atrophy of the thyroid is rare in infancy.

DISCUSSION.

Drs. Castellvi, Madrid, and Parkinson spoke, agreeing with the points made.

Professor Lorand said that diabetic patients are improved by new conditions producing thyroid atrophy, such as cancer or tuberculosis of the thyroid. Hypertrophy is rare in tuberculous abscess. There is swelling of the gland in infections. An antibacterial function was inferred from the action of the gland *in vitro*. Secondary thyroid atrophy in marasmus produces an indurate edema like myxedema and there is a similar loathing for meat.

Clinical Forms of Hyperchlorhydria.

Dr. Thorena, Madrid, said that this condition is only a symptom of some functional, organic or constitutional disease. Its treatment is chiefly symptomatic and rather unsatisfactory, and relapses are frequent. The diet should be albuminous. Condiments should be omitted. Alkalies are useful. Gastroenterostomy may be required in severe cases with myasthenia, dilatation and inability to diet.

DISCUSSION.

Dr. Maragliano, Naples, protested that the condition was invariably functional and subject to nervous influences. The symptom is controllable medically and operation is absolutely contraindicated. He thought that the profession commonly overestimates the importance of HCl.

Luetic Arthritis.

Professor Singer, Vienna, described this condition, which he said was found in the tertiary stage of syphilis. The character of the process is a torpid thickening of the capsule and of the periosteum accompanied by exostoses. It may last for years without much functional disturbance; the latter is usually slight. Diagnosis is to be made in most cases by the absence of fever, and by the exclusion of an associated endocarditis or gonorrhea. The "mixed treatment," he thought, secured the best results.

Section on Pediatrics. Discussion of Artificial Feeding.

Professor Concetti, Rome, emphasized that the artificial feeding of infants was inadvisable, but occasionally became necessary. It is inadvisable because the natural milk of the mother is never replaced by the most perfect substitute, while sterilization of cow's milk and other artificial foods destroys their susceptibility to the action of the digestive ferments and renders assimilation imperfect.

DISCUSSION.

Dr. Raimondi, Paris, said that he had been able to secure aseptic milk for the use of 200 children from birth to two years of age. He described his method, which was to have the udders of the cows and the hands of the milkers thoroughly washed in a 1-1,000 solution of bichlorid. He did not have the milk itself subjected to sterilization or alteration, but it was given to the children within 20 minutes after it came from the cows. This plan had met with almost invariable success as no digestive disturbance traceable to the food was found among the infants. General congratulations were offered Dr. Raimondi.

Scarlatina.

Dr. Moser, Vienna, described the results of his scarlet fever serum. He said that 142 children had received treatment. The serum was obtained from horses which had been immunized by a mixture of cultures of streptococci and the heart blood of scarlatina. Seven months were required to complete the immunization; 150 c.c. produced an exanthematous fever. The use of the serum counteracts the constitutional vomiting and the delirium reduces the pulse and temperature in less than twenty-four hours. Its administration should be begun as early as possible in order to prevent the occurrence of angina and nephritis. These complications have been markedly reduced by its use and the mortality lessened one-half. Agglutination of the scarlet fever cocci is obtained in dilutions of 1 to 250,000.

been inefficacious in a suspected case, laparotomy is indicated. For benign stenosis, operation affords immediate relief and has no greater mortality than herniotomy. In hour-glass contraction and painful adhesions this procedure gives good results. For the acute hemorrhage of ulcer Dr. Hartmann recommends operation only in those cases complicated by pyloric stenosis, with gastric unrest; here gastroenterectomy is the best sedative and hemostatic. Ulcers which remain painful in spite of treatment, gastrosuccorrhea and rebellious hyperchlorhydria, if accompanied by the pyloric syndrome, probably indicate an ulcer at the outlet, and demand operation.

General Sessions—Immunization of Man Against Tuberculosis.

Prof. E. Maragliano, Genoa, said in his address before the general conference that there existed in most individuals a natural immunity against tuberculosis. By this fact is explained the escape of the large number of persons who are daily exposed to infection. This power of resistance is apparently potent in direct ratio to the standard of good health maintained in the individual. Any decline of the vital strength renders the organism just so much more liable to invasion. The truth of this assertion is confirmed by experimentation on lower animals and by observation on the denizens of the tenement districts. The object for which the author had been zealously laboring for thirty years was the establishment of this standard of immunity through improved methods of living and also by the use of an immunizing serum that might be injected hypodermatically or perhaps taken by the mouth. Professor Maragliano thought he had made some progress in this direction, as his experiments on animals had met sufficient success to justify a trial on man.

Closing Session.

At the close of the general session addresses were delivered by representatives of the several nations that had taken part in the congress. It was regrettable that the committee representing the United States should have been refused admission to the stage at the inauguration of the ambassadors and that our delegate alone failed to deliver his address. In this connection and in explanation of the above-mentioned irregularities it should be stated that the preparations for the accommodation of the scientific and public meetings of the congress were very inadequate. The sections were forced to occupy widely separated halls, to which there were unsatisfactory means of transportation. Perhaps the most noticeable lack of organization was to be seen in the want of an authoritative bureau of information. Even the committees were unable to tell when or where many of the important proceedings would occur.

The social festivities, however, were abundant and enjoyable. Americans especially appreciated the hospitality of Mr. and Mrs. Arthur S. Hardy, the United States minister to Spain.

Prizes.

At the session held in 1897 at Moscow that city voted, in honor of the Russian meeting, a prize to be awarded for original research. This was unanimously awarded Professor Metschnikoff. A similar prize, donated by the city of Paris, was awarded, after a spirited contest, to Professor Grassi. On the first ballot the votes stood Grassi 42, Roentgen 39, and Lavaran 5.

The next place of meeting will be at Lisbon, Portugal, in 1906, with Professor Alfredo da Costa of that city as president.

(*To be continued.*)

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-third Annual Meeting, held in Chicago, April 29 and 30, and May 1 and 2, 1903.

The society convened in Tremont Hall of Northwestern University, under the presidency of Dr. M. L. Harris, Chicago.

Addresses of welcome were delivered by Dr. Taylor, prosecuting attorney of Chicago; Hon. Henry G. Foreman, president of the county commissioners, and by Dr. James H. Stowell.

The response to these addresses was made by Dr. M. L. Harris, the president.

President's Address.

President Harris, in his address, stated, among other things, that success, as applied to the life of the physician, meant something else than his own opinion of himself. It meant the realization by others of the value of his labors, of their value, not simply from a commercial standpoint, but from the standpoint of the scientist and the humanitarian, to others of his knowledge and skill. That natural aptitude and ability count for something in determining the degree of success to which an individual may attain must be granted, as it is a common observation in all walks of life that some individuals with scarcely any opportunities in early life have struggled to the top, over almost insuperable obstacles; notwithstanding this fact, the scientific child study which so many are now vigorously prosecuting with such rich rewards for their labor, demonstrates clearly that much of the dulness, the apparent stupidity and lack of capacity to learn in the early years of life were closely related to, if not dependent on, certain physical defects, and that many of these defects and the capacity to learn had, in a broad sense, a nutritional basis.

He recapitulated briefly the factors which contribute most to the scientific success of the physician, namely: 1. A thorough knowledge of the rules of logic and the theory of reasoning, in order that the physician might be able to deduce warrantable conclusions from the evidence at hand. 2. The physician must train his powers of observation, in order to present to his reasoning faculties correct data. 3. He must be familiar with what is known on the subject before him, in order that he may correlate his own observations with the facts presented by others.

Approximately seventy papers were read before the three Sections, and three general addresses delivered. We present abstracts of some of the more interesting papers.

The Dangers of Exclusive Milk Diet in Nephritis.

Dr. A. C. Croftan of Chicago read a paper with this title. The popular prejudice in favor of an exclusive milk diet in nephritis, and the fundamental fallacies of this prejudice, were pointed out. The three indications for dietetic treatment of nephritis were: 1. Protection of the secreting epithelium of the kidney. 2. Protection of the cardio-vascular apparatus. 3. Protection of the general nutrition of the patient. The author presented reasons why an exclusive milk diet met none of these requirements. The best substitute for an exclusive milk diet, as deducted from modern investigations into the causes of nephritis and the excretion of urinary solids in inflammatory diseases of the kidneys, was pointed out.

The Breast Versus the Bottle in Infant Feeding.

Dr. Alfred C. Cotton, Chicago, compared the mortality statistics of natural and artificial feeding. He referred to the relative morbidity attending each method. Human milk was compared with that of other mammals. He pointed out the dangers of the acceptance of even the best known methods of artificial feeding. The more nearly perfect the food laboratory the greater were the possibilities of harm from over-confidence in artificial methods. Infants were too frequently denied the breast for trivial and insufficient reasons. In view of our knowledge of the morbidity and mortality of artificially fed infants what right had physicians needlessly to expose any infant to such chances? He made a plea for the establishment of a bureau of information and supervision, to facilitate the procuring of wet nurses when required.

Cockroaches as Typhoid Infection Carriers.

Dr. Rosa Engelmann, Chicago, discussed this subject under the following heads: 1. Vermin as active intermediary hosts of various infections. 2. History of a house epidemic of typhoid fever. 3. Cockroaches, sewage and water denizens not heretofore classed as typhoid infection carriers. 4. Need of examination and cultures from intestinal contents and from feet of cockroaches for pathogenic germs—especially the Eberth bacillus. 5. Opportunity the coming summer (after necessarily prolonged rainfall) for such work in the vermin-infested slums of Chicago. (A portion of this paper was reported in The Journal, Feb. 14, 1903, p. 464.)

Hysteria.

Dr. Hugh T. Patrick, Chicago, reported cases of hysterical paraplegia, hysterial amblyopia with rigid pupil, hysterical anorexia, hysterical pseudo-meningitis and hysterical deafmutism.

The Treatment of Some of the Degenerations of the Cerebro-Spinal Apparatus, with Particular Reference to Optic Atrophy.

Dr. Archibald Church, Chicago, said that the general feeling was that degenerations taking place in the conducting tracts of the cord, as in locomotor ataxia and atrophy of the optic nerve, arising from any cause, as well as the changes in the brain and cord that are found in paretic dementia, are quite unamenable to treatment. In all of these conditions the tendency to remission was, in itself, a confusing element in judging the therapeutic value of any line of treatment. In the case of the optic nerve, the ophthalmoscope enabled the physician to accurately see changes which were taking place, and by approximate tests variations for better or worse could be actively determined and systematically recorded. A number of cases of optic atrophy associated with a secondary syphilis had been under observation for from two to ten years, and were made the basis of an estimate of the value of mercury in controlling these degenerations. Ophthalmoscopic examinations and perimetric records made in these cases by competent oculists demonstrate that in some instances degenerations in the optic nerve could be distinctly controlled. Other cases of locomotor ataxia and paretic dementia were adduced, in which the clinical records indicated a similar retarding influence on the processes of degeneration in the brain and cord.

Euphthalmin as a Mydriatic for the General Practitioner.

Dr. Albert B. Hales, Chicago, said that the use of the ophthalmoscope was becoming more general in medical diagnosis. He pointed out the need of a drug to dilate the pupil, not only to study the condition of the fundus, but also to note the condition of the cornea, iris and lens. Atropin was too powerful, and destroyed accommodation. Homatropin was of only less strength, and was expensive. Cocain was good, but dangerous to the eye. Euphthalmin scarcely affected accommodation; it dilated the pupil fully and in a short time. It had no dangerous element about it, and its effect passed quickly away. He detailed experiments.

Abdominal Pain in Pleurisy and Pneumonia.

Dr. James B. Herrick, Chicago, said that pain in pleurisy and pneumonia might be referred not only to the affected side of the chest, but to the opposite side of the abdomen. In the latter case, abdominal disease, for example appendicitis, might be simulated. He dwelt on the importance of recognizing the thoracic organ of pain, as it might thus prevent surgical interference. Illustrative cases were reported. The anatomic basis for the referred pain was found chiefly in the course and distribution of the intercostal nerves. The diagnosis was generally easy when once the possibility of the thoracic cause for the abdominal pain was thought of, and a careful examination of the chest made.

Some Unusual Cases of Chorea.

Dr. L. Harrison Mettler, Chicago, reported cases and advanced the idea that chorea was a symptom and not a disease; that its etiology was not so obscure as it appeared to be; that it has some remarkable frequently overlooked features in its symptomatology, and that its treatment was varied and deserving of more careful study.

The General Practitioner and His Relation to Early Surgical Operations.

Dr. E. B. Montgomery, Quincy, called attention to the fact that the internists were too often apt to be influenced by the law opinion that surgical operations were only to be done as a last resort, and unconsciously lent themselves to delay in a large class of cases that should have surgical intervention early in their course. He contended that the unfavorable results which were shown to follow in too large a percentage of cases of carcinoma of the breast and uterus were due to late operation. Appreciating this, the general practitioner should encourage among his patrons immediate consultation of the physician concerning every trouble with the breast in women, however insignificant, or any irregular hemorrhage, occurring after the age of 40 years, and, if there was the slightest question concerning the presence of malignant disease, should associate a surgeon with him in the case. In the author's opinion, the same rules should obtain in typhoid fever, with any evidence of perforation; in appendicitis; in cholecystitis with enlargement of the gall bladder, and in enlargement of the prostate gland after the catheter life has begun; in pleuritic effusions lasting over two weeks, either purulent or not, and in hypertrophic cirrhosis of the liver, the early presence of the surgeon was advocated. In support of these opinions, facts and cases were adduced.

The Traction Injury of Arteries.

Dr. S. M. Wylie, Paxton, said that normal nutrition and vascularization of the extremities depended on an unobstructed flow of normal blood. Stagnation, partial or complete, favored the formation of fibrinous clots. Traction injuries of the arteries, by disturbing the normal relation and function of the various coats, favored the formation of thrombus in two ways: 1. The ruptured walls of the interna curling up in the lumen of the vessel act as an obstructant to the current. 2. The loss of contractile power from the overstretched or torn muscular fibers favored stagnation and arrested the flow. Both were factors in the function of occlusion thrombi, causing complete arrest of the circulation and subsequent death of the part. This was a surgical accident often overlooked at the time of the first dressing of an injured extremity, and when subsequent gangrene ensued, as it often did, it was attributed to faulty methods of applying the dressing.

Modern Surgery of Congenital Cleft Palate.

Dr. S. R. Hopkins, Springfield, gave a description of the uranoplastic operation in its infancy, and its advantages over later operations, with the statistics furnished by different operators. He likewise gave a description of staphylorrhaphy in later life; also made remarks on the power of speech following operations. He recommended a change from the usual *modus operandi* of closing continuous clefts in children over six months of age, with a report of two cases illustrating the proposed method.

The Treatment and the Causes of Death in Placenta Previa.

Dr. P. M. Burke, La Salle, pointed out that the cause of death in placenta previa was extensive rupture of the uterus and not hemorrhage due to a mere separation of the placenta in the act of turning, as was popularly believed. Out of 9 cases, in all of which he turned, there were 4 extensive ruptures. Three of the patients died and one recovered. The cause of death applied to the mother, as the cause of death of the child was self-evident. The only deaths were in the ruptured cases unrepaired. The lack of knowledge was due to small individual experience, consequent on the infrequency of such cases. In numerous cases of turning, in about a thousand cases of obstetrics, he never had had a rupture except in placenta previa. The occurrence of rupture in these cases was not a coincidence, but due to the friable, brittle condition of the lower segment of the uterus. The treatment was surgical operation, prompt, heroic and successful repair of the rupture.

Tuberculosis of the Vestibule of the Female Genitals.

Dr. J. H. Stealy, Freeport, reviewed the literature and referred to the rarity of the lesion; the possible cause of the unfavorable course taken by the disease in this region; the difficulties attending the determination of whether the lesion was primary or secondary, and its bearing on the prognosis. He said the tuberculin test was the only accurate method.

Officers for the Ensuing Year.

The following officers were elected: President, Dr. Carl E. Black, Jacksonville; secretary, Dr. E. W. Weis, Ottawa; treasurer, Dr. Everett J. Brown, Decatur. Bloomington was selected as the place for holding the next annual meeting.

The new constitution, in conformity with the plan of the American Medical Association, was adopted without material change.

Marriages.

Horace M. Simmons, M.D., to Miss Caroline F. Johnson, both of Baltimore, April 22.

Edwin H. Ehlert, M.D., to Miss Elizabeth S. Pike, both of Hartford, Wis., April 25.

Maynard A. Austin, M.D., to Miss Anna Grace Baker, both of Anderson, Ind., April 29.

S. Edward Sanderson, M.D., to Miss Clara May Stevens, both of Detroit, Mich., April 28.

Augustin V. Wendell, M.D., to Miss Catherine F. Klein, both of Newark, N. J., March 25.

Thomas C. Peebles, M.D., to Miss Maud Van Tine, both of Lutherville, Baltimore County, Md., April 23.

Deaths.

James Bonaparte Greeley, M.D. Vermont Medical College, Woodstock, 1855, died at his home in Thornton's Ferry, N. H., April 21, from heart disease, after an illness of two days, aged 71. He was born in Nashua, N. H., served as surgeon of the First Rhode Island Regiment in the Civil War, and was one of the best-known physicians in Southern New Hampshire. He also represented the town of Merrimack in the state legislature.

Washington Franklin Anderson, M.D. University of Maryland, Baltimore, 1841, the oldest physician in Utah; once medical adviser to Brigham Young, a resident of Salt Lake City for forty-six years; first president of the Utah Medical Society; a member of the territorial legislature in 1860 and 1861, died at his home in Salt Lake City, April 22, after a short illness, aged 80.

Herman H. Schaberg, M.D. Detroit College of Medicine, 1878, a member of the American Medical Association, and the Kalamazoo Academy of Medicine, at various times health officer and city physician of Kalamazoo, died at his home, April 24, from pneumonia, after an illness of one week, aged 54.

Hiram Long, M.D. New York Medical College, New York City, 1859, surgeon in the Civil War, for several terms president of the Sunbury (Pa.) Medical Association, died at his home in Sunbury, from heart disease, April 24, after a short illness, aged 71.

Benjamin Morris, M.D. University of Virginia, Charlottesville, Va., formerly of Martinsville, Va., died at the home of his father, Dr. William W. Morris, near Rangeley, Va., from consumption, April 15.

William H. Wooden, M.D. Medical College of Ohio, Cincinnati, 1879, a member of the Decatur County (Ind.) Medical Society, died at his home in Greensburg, April 23, aged 45.

Addison Cyrus Hinkson, M.D. College of Physicians and Surgeons of San Francisco, 1901, of Nevada City, Cal., died suddenly in San Francisco, April 22, from heart disease, aged 28.

William R. Davis, M.D. Eclectic Medical College of the City of New York, 1891, died at his home in Utica, N. Y., from consumption, April 19, after a lingering illness, aged 47.

Joseph A. Stegmann, M.D. Hahnemann Medical College, Philadelphia, 1886, died at his home in Philadelphia, April 24, from typhoid fever, after an illness of two weeks, aged 40.

Thomas A. Pineo, M.D. Long Island College Hospital, Brooklyn, 1898, died at his home in Brooklyn, April 19, from pneumonia, after an illness of nine days, aged 38.

James R. Todd, M.D. Kansas City Medical College, 1883, died at his home in Gridley, Cal., April 21, from septicemia, following an accident, after a long illness, aged 59.

H. T. Breckbill, M.D. Pulte Medical College, Cincinnati, 1878, died suddenly while walking from his office to his house in Columbus Grove, Ohio, April 22, aged 60.

Roswell E. James, M.D., died at his home in Kalamazoo, Mich., April 23, from internal hemorrhage, after an illness of two days, aged 68.

Richard R. Breisch, M.D. Jefferson Medical College, Philadelphia, 1881, retired from practice, died at his home in Ringtown, Pa., April 22.

Charles E. Reese, M.D. Jefferson Medical College, Philadelphia, 1855, died at his home in Lowndesboro, Ala., April 25, after a short illness.

William W. Miller, M.D. Western Pennsylvania Medical College, Pittsburg, died at his residence in that city, April 16, from pneumonia.

Edwin B. Reed, M.D. University of Pennsylvania, Philadelphia, died at Little Togus, Me., April 24, from dropsy, aged 65.

D. J. Grandstaff, M.D. Louisville Medical College, 1878, died at his home in Mason, Texas, from exposure, April 22.

Jared M. Newell, M.D. University of Buffalo, 1873, died at his home in Rochester, N. Y., April 23, aged 82.

Robert M. Morgan, M.D., died at his home in Decherd, Tenn., April 25, from heart disease, aged 70.

State Boards of Registration.

Rhode Island Report.—Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the examination held at Providence, April 2 and 3, 1903, as follows: Number of subjects examined, 7; total questions, 70; percentage required to pass, 75; written examination; total examined, 14; passed, 9; failed, 5.

PASSED.

Candi-date.	Sch. of Pract.	College.	Year Grad.	Per Cent.
203	R.	Illinois Medical College...........	1903	81.4
204	R.	Yale University, Medical Dept......	1903	*86.8
205	R.	Dartmouth Medical College........	1900	79.0
212	R.	Dartmouth Medical College........	1903	79.6
206	R.	University and Bellevue Med. Coll..	1899	82.0
208	R.	Harvard Medical School...........	1876	76.8
209	R.	Harvard Medical School...........	1900	81.1
210	R.	Coll. Phys. and Surgs., Baltimore...	1902	75.0
216	R.	Leonard Medical College...........	1902	78.6

FAILED.

Candi-date.	Sch. of Pract.	College.	Year Grad.	Per Cent.
207	R.	Illinois Medical College...........	1902	67.3
211	E.	Georgia Coll. Ecl. Med. and Surg...	1895	67.6
213	R.	Tufts Medical College.............	1903	*74.2
214	R.	University of Vermont, Med. Dept..	1898	72.1
215	R.	Baltimore Medical College	1893	58.2

* Undergraduates, about to receive diplomas.

Minnesota Report.—Dr. C. J. Ringnell, secretary of the Minnesota State Board of Medical Examiners, reports the examination held at St. Paul, April 7 to 9, 1903, as follows: Subjects, 12; questions, 95; percentage required, 75; written examination; number examined, 23; passed, 20; failed, 3.

PASSED.

Candi-date.	Sch. of Pract.	College.	Year Grad.	Per Cent.
2155	R.	University of Michigan............	1898	84.0
2156	R.	University of Pennsylvania........	1883	77.9
2170	R.	University of Maryland...........	1900	77.4
2158	R.	Medico-Chirurgical College, Phila...	1902	82.8
2159	R.	McGill University	1900	87.3
2160	R.	Coll. of Phys. and Surgs., Milwaukee	1902	*75.0
2163	R.	Coll. of Phys. and Surgs., Chicago..	1902	†77.6
2167	R.	Coll. of Phys. and Surgs., Chicago..	1902	†76.7
2168	R.	Coll. of Phys. and Surgs., Chicago..	1902	*75.0
2164	R.	Coll. of P. and S., Keokuk, Iowa....	1900	75.0
2161	R.	Rush Medical College, Chicago.....	1901	75.7
2169	R.	Rush Medical College, Chicago.....	1901	83.1
2166	R.	Kansas City Medical College.......	1899	*76.1
2171	R.	Kansas City Medical College.......	1901	84.1
2172	R.	Hamline University	1902	80.8
2173	R.	Hamline University	1902	77.5
2174	H.	Hahnemann Med. Coll., Chicago....	1895	77.1
2175	R.	Dartmouth (N. H.) Medical College.	1902	78.8
2176	R.	Vanderbilt University, Tenn.......	1900	78.3
2177	R.	Laval University	1902	83.4

FAILED.

Candi-date.	Sch. of Pract.	College.	Year Grad.	Per Cent.
2157	R.	Hamline University	1902	71.3
2162	R.	Marion Sims Med. Coll., St. Louis..	1902	‡63.5
2165	R.	Sioux City College of Medicine.....	1896	+64.5

* Second examination.
† Third examination.
‡ Failed four times.
+ Failed twice.

Association News.

New Members.

New members for the month of April, 1903:

ALABAMA.

Ellis, J. L., Dothan.
Parker, E. C., Montgomery.
Mertins, Paul S., Montgomery.
Henderson, W. T., Mobile.
Lull, Cabot, Birmingham.
Jenkins, J. F., Coleanor.
Campbell, Douglas G., Mobile.
Kennedy, J. O., Kennedy.
Parke, T. D., Birmingham.
Atkins, Jas. M., Troy.
Arnold, L. W., Florence.

ARKANSAS.

Dickson, H. N., Jamestown.
Stewart, W. S., White Oak.
Morrow, F. R., Green Forest.

CALIFORNIA.

Farrow, E. J., San Francisco.
Eaton, G. L., San Francisco.
Steinwand, O. W.; Selma.
Cumming, H. F., Angel Island.
Van Dyke, E. C., San Francisco.
Jones, L. F., Tuolemne.

COLORADO

Spaulding, W. F, Greeley.
Espey, J G, Trinidad.
Robinson, G. W, Trinidad.
Blackman, A A, Colorado Sprgs.

CONNECTICUT.

Miller, G R, Hartford
Anderson, H G, Waterbury.
Murphy, W. G., East Hartford.

DISTRICT OF COLUMBIA.

Perry, G N, Washington.
Prentiss, D. W, Washington

FLORIDA.

Fernandez, J. D, Jacksonville.

GEORGIA.

Thornton, H E, Hartwell.
Sikes, J. A. B., Iron City.
Wright, T R, Augusta
Corry, J A, Barnesville
Kenyon, O T, Dawson
Moore, N. McH., Augusta.
Dean, R H, Jacksonville

IDAHO

Bibby, S E, Grangeville.
Allen, O J, Custer.

ILLINOIS

Neale, R A, Chicago
Eberhart, N M, Chicago.
Mastin, J G, Chicago
Ryerson, E W, Chicago
Pirosh, Berthold, Chicago.
Rice, May C, Chicago
Hecht, D'Orsay, Chicago
St Clair, F P, Chicago
Williams W C, Chicago.
Wright S E, Chicago
McEwen, E L, Chicago
Snyder, K F, Freeport
Kercher, W L, Freeport
Wilson, W. H., Kankakee.
Hagler, A Lee, Springfield
Horner, Clyde F, El Paso

INDIANA.

Cannon, G H, New Albany.
Weathers, J F, New Albany.
Potter, Theo, Indianapolis.
Bailey, G D, Spiceland
Lynch, J Y, Rosedale

IOWA

Fisher, E E, Rodney
Burge, A J., Iowa City
Spearman, F. S, Hawkeye
Martin, D T, Pomeroy
Frank, C. S, Epworth
Castello, W E, Zwingle.

KANSAS.

Barnett, B M, Rosedale
Smith, A. J Leavenworth
Alkire, H L, Topeka
Fear, J C, Waverly.

KENTUCKY

Daugherty, C G, Paris
Bruner, B L, Hardyville
Yazell W S, Maysville
Manning H R, Louisville
Bohannon, J G, Greenville
Moren, J J Louisville
McClure, W B, Lexington.
Cartwright, F D, Bowling Green
Mason, H M, Hazel
Robins, Vernon, Louisville
Jenkins, G B, Louisville
Moneyhon, T J, Augusta
Abell, Irvin, Louisville
Phythian, J L, Newport

LOUISIANA.

Butterworth, W. M, N Orleans
Campbell, R C, Shreveport
Holt, Jos, New Orleans
McIlhanny, P A, New Orleans
Brosnan, D S, New Orleans
Calhoun, W. W, New Orleans
Pray, A A, New Orleans
Pothier, O L, New Orleans.
Oechsner, Herman, New Orleans
French, T T., New Orleans.
Cazenavette, L L, New Orleans
Castellanes, J J, New Orleans
Caire, Arthur, New Orleans
Szabary, Latzi, New Orleans
Richard, J I, New Orleans
Noto, Cosimo, New Orleans
Landauer, S. C, New Orleans
Parker, J. P, New Orleans.
Seemann, W. H., New Orleans.
Richards, W. T, New Orleans
Mandeville, W. R, New Orleans.
Clark, S M D, New Orleans.
DeGrange, J T, New Orleans
Keitz, Gustav, New Orleans.
Hale, S E, New Orleans.
Wolfe, J. T, New Orleans.
Hoefeld, A O, New Orleans.
Siekmann, I. F, New Orleans
Wolff, H. D, New Orleans
Kendall, W S, Ruston.
Roberts, R, Ruston
McBride J S, Ruston
Quirk, Wm A, Evergreen
Biggs, O A Columbia
Hagaman, W. F, Norwood.
Hawkins, R. G, Palmetto
Scott, J J, Shreveport.
Knolle, W H, New Orleans
Barker, W E, Plaquemine
Bellinger, P. L, Waterproof.
Edgerton, C. E, Coushatta
Mayer, F. J., Scott.

MARYLAND.

Watson, W. T, Baltimore
Theobald, Sam'l, Baltimore

MASSACHUSETTS

Lynch, Chas. F, Springfield
Pease, E. A, Boston
Tucker, S Chase, Peabody

MICHIGAN

Elwood, C. R, Menominee
Noer, Peter J., Menominee
Rowley, A S, Traverse City
Robinson, D E Jackson
Knight, F J., Charlotte
Warner, J. H, Detroit
Bonning, Carl Detroit
Strong, Martha C, Jackson
Donald, W Mcl, Detroit.
Suttie, Geo, Detroit.

MINNESOTA

Hart, M J, LeRoy
Kilbride, J S, Canby
Golberg, Martin Luther, Twin Valley
Miller, W. A, New York Mills.
Christenson, C. R, Starbuck.

MISSISSIPPI

Johns, W. A., Corinth
Brister, S L, Greenwood
Wood, G H, Batesville
Stennis, I E, McComb City
Davis, W. W, Ora
Wiss, Rosa D, Meridian
Reynolds, W W, Meridian.
Crigler, L W, Columbus.
Howard, E F., Vicksburg
Plunkett, J H, McComb City

MISSOURI

Calvert, W. J, St. Louis.
Boyson, J P, St Louis.
Johnson, H McC, St. Louis
Cummings, H J, St Louis
Bartlett, Willard, St Louis
Gross, J H, St Louis
Riesmeyer, L T, St Louis
Stewart, Floyd, St Louis
Buckwalter, J C, St Louis
Bishop, F L, St Louis
Parker O H, Kansas City
Thrailkill, E H, Kansas City.
Moss, Woodson, Columbia
Polson John, Laclede
Buck, L G, Rothville.

NEBRASKA

Tornholm, Frank, Ashland
Cleveland, Luella S, Shelton.
Raines, R F, Red Cloud

NEW JERSEY

Lee, S G, East Orange

NEW MEXICO

Henry, J A, Albuquerque

NEW YORK.

Starke, G. H. E, New York City
Tuttle, G A, New York City
Schlegel, G, New York City
Simmons, J G, New York City.
Simmons, C E, New York City
Peck, C H, New York City
Lisle, J de, New York City
Jackson, C W, New York City
Foster, G V, New York City
Smith, A A, New York City.
Ruhl Henry, New York City
Ward Jr, G G, New York City
Elebash, C S, New York City
McCoy, John, New York City
Saril, H D, New York City.
Tracy, I O, New York City
Lewinthal, D. C, New York City
Schondelmeier, C T, Brooklyn.
Fuhs Jacob, Brooklyn
Thelberg, Elizabeth B, Poughkeepsie.
Robertson, Victor A Brooklyn
Northway-Meyer, Oscar, Monticello
Slade, Mary, Castile.
Payne, A. E., Riverhead.
White, A. D, Ithaca
Armstrong-Hopkins, Salem, Tyre.
Wieber, Adolph, Brooklyn.
Steele Wellington G, Mongaup Valley.
Mahady, C. R, Rome
Wheelock, A. A, Elizabethtown.
Mears, John Bowdoin, Buffalo

NORTH CAROLINA

Banner, C. W, Greensboro
Pendleton, A. S, Henderson.
Anderson, T. E, Statesville.

OHIO.

Woodson, O M, Wellston
Spohr, Carl Louis, Columbus
Hendershot, B S, New Philadelphia
Jones, E. J, Oak Hill
Felker, Gertrude, Dayton.
Everhard, Eleanora S, Dayton
Hermann, G. A, Hamilton.

OREGON.

Henderson, Thos M, Pendleton.
Spencer, W. O, Huntington.

PENNSYLVANIA.

Van Sickle, F. L, Olyphant.
Wakefield, A. N., Johnstown
Porter, John, McKeesport.
Bessey, Herman, Scranton
Norris, G. W, Philadelphia.
Ostheimer, Maurice, Philadelphia.
Zentmayer, Wm, Philadelphia
McCurdy, J. R, Pittsburg.
Brenneman, R E, Pittsburg.
Yagle, J L, New Freedom
Koontz, D. M., New Kensington

SOUTH CAROLINA.

Harmon, S E, Columbia

TENNESSEE

Hudson, Alberto, Nashville.
Blackburn, E. C., Memphis
Holder, Eugene Michel, Memphis
McKinney, Richmond, Memphis.
McLean, J. L, Memphis.
Henning, D M, Memphis.
Rowland, J F, Nashville.
Cooke, A. B, Nashville.
Cullom, M M, Nashville
Stephens, J. Bunyan, Nashville.
Wood, E G, Nashville
Brower, Chas, Nashville.
Smith, Larkin, Nashville.
Anderson, W. B, Nashville.
Brew, Jas, Nashville.
Anderson, W. E, Chattanooga.
Abernathy, G. L, Hill City.
Cochrane, H. P, Franklin.
Pitts, Rufus, Murfreesboro.
Rees, H C, Murfreesboro.
Porter, O. J, Columbia.
Pillow, Robert, Columbia
Hill, J. F, Memphis.

TEXAS.

Torbett, J. W, Martin.
Buie, John, Hillsboro
Barnitz, H. D, San Antonio
McDaniel, A. S., San Antonio.
Shelmire, J. B, Dallas.
Yates, J. D, Jasper
Thompson, J. H, El Paso.
Haskell, Pliny F., Keene.
Hertzberg, E F, San Antonio
Barber, Lyman A., Ft. Worth.
Scott, Chas T, El Paso.
Smith, M., Sulphur Springs

VIRGINIA.

Old, W. L., Norfolk.

WASHINGTON.

Holt, Chas. L, Whatcom.
Case, C. E, Tacoma
Foster, M. H., Pt. Townsend.

WEST VIRGINIA.

Hansford, J. H, Crown Hill.
Young, H. H, Charleston.
Peck, Nelson, Clarksburg

WISCONSIN.

Carr, Bernard J, Beloit.
Moffatt, Henry L, Poy Sippi.
Lemmer, G. N., Spooner.
Ritchie, G. A, Appleton.

Miscellany.

The Formula of Disease.—An exchange quotes the formula of disease as

$$D = \frac{M V N}{R}$$

D represents the disease; M the microbe, multiplied by V, its virulence, and N its numbers; divided by R, the resisting powers of the organism. We would suggest, as an improvement, to multiply the resisting powers of the organism by P, the wise guidance of the physician, which immeasurably reduces the quotient of the disease as expressed in the first formula. The laity have the impression that the physician alone fights the disease. They seldom or never realize that the ablest physician can work only through the resisting powers of the organism, and if these are defective he is baffled at every turn and all his efforts are fruitless; he can not save the patient any more than the pilot can save the vessel if it is leaking too badly. The pilot takes the helm and steers the ship past the shoals and rocks by the shortest route to the dock, inspiring and aiding the officers and crew to do their utmost to keep it afloat a little longer, but if the ship is too badly scuttled it will sink before reaching the dock, in spite of all his knowledge and skill. If the public once realized that the same is true of the physician, they would cease to expect the impossible of him, and the platform on which charlatans and Eddyites build would be cut from under them with the general recognition of the truth in the amended formula:

$$D = \frac{M V N}{R + P}$$

Phototherapy in Neurasthenia.—Joire has found that red light has a marked beneficial action in neurasthenia. It soothes the nerves; increases the vitality and appetite; improves digestion, and the nutrition in general seems to appreciate the benefit He has been applying it for this purpose on a large scale during the past year, and lauds it highly in his communication on the subject to the "Nord Méd," ix, No. 181.

THE NEW ORLEANS SESSION

RECORD-BREAKING ATTENDANCE.

New Orleans Session Attended by Large Delegations from All Parts of the Country.

The fifty-fourth annual session of the American Medical Association at New Orleans has proven a great success in point of attendance and in scientific interest. Reports by telegraph received as we go to press predict that this will be the largest session ever held. At the close of the registration department Wednesday night, 1,941 members had registered. This was at the close of the second day, and, although most of those present at the annual sessions register before the end of the second day, there are always a number who register later. It is, therefore, probable that the New Orleans session will be the largest ever held. It will be remembered that at the Atlantic City session in 1900 there was a total registration of 2,019, at St. Paul 1,806 and at Saratoga 1,425. The New Orleans session needs only 79 more registrations in order to break the record. All parts of the United States are represented.

ARRANGEMENTS SATISFACTORY.

Chief Hotels Crowded but Ample Accommodation Elsewhere. Weather is Fine.

It was feared last week that the temperature might interfere with the pleasure of those in attendance, but this fear has not been realized, for the weather is delightful and no complaint is heard in this regard.

The Committee of Arrangements, whose efficient chairman is Dr. Isadore Dyer, are being praised for the excellent way in which their work has been done, and while there is some crowding in the leading hotels, ample accommodations have been provided for all the visitors.

HOUSE OF DELEGATES MEETS.

Busy Meetings Held Daily—The Reports of Trustees and Officers Read.

The House of Delegates met in preliminary informal session Monday afternoon and evening and transacted considerable business. The meetings of Tuesday and Wednesday have been very busy ones and a large amount of business has been transacted.

Labor on the Code of Ethics.

The question of the Code of Ethics and its revision was met by referring the matter to a committee composed of one representative from each state represented in the House of Delegates, together with the original special Committee on Revision of the Code of Ethics. This enlarged committee held several meetings and carefully and thoroughly considered the matter.

EXCELLENT SCIENTIFIC PROGRAM.

Sections Have Large Attendance and Much Interest Is Shown.

The scientific part of the convention is very well organized, and almost all of the sections started out with prospects of valuable series of meetings. The attendance at the section meetings is unusually good and excellent work is being done.

The publication of the scientific proceedings of the New Orleans session begins in this issue with the address of the President, Dr. Frank Billings, on "Medical Education in the United States." This was delivered at the first general meeting, in Tulane Theater, Tuesday, May 5, at 11 a. m. The same day, at 7:30 p. m., Dr. A. F. Jonas, Omaha, delivered the annual Oration on Surgery, taking as his subject "Cancer and Immunity." This oration appears in full in this issue.

Wednesday evening, at 7:30, Dr. J. M. Anders, Philadelphia, gave the Oration on Medicine. This also appears in full in this issue, the subject being "Social Conditions in America in Their Relation to Medical Progress and Disease."

SECTION PAPERS READ.

The Great Problems of the Art of Healing Are Discussed.

The good work done by the officers of the various sections in preparing their programs has been followed up by the co-operation of those listed to read papers. The publication of the papers read in the sections will commence in The Journal, May 16, and will be pushed rapidly. Some of the papers read in the Section on Surgery and Anatomy, the Section on Cutaneous Medicine and Surgery and the Section on the Diseases of Children will be printed in full in next week's issue.

Section on Hygiene and Sanitary Science.

The important subject of "Vital Statistics" was the subject of a spirited discussion in the Section on Hygiene and Sanitary Science. Dr. H. M. Bracken, chairman of the section, in his address in opening the program, emphasized the need of uniformity in this regard, and he was followed by Dr. Cressy L. Wilbur of Lansing, Mich., who urged co-operation in vital statistics' gathering. Dr. Wilbur said that those who use vital statistics most ought naturally to be the ones who should say what is wanted in those statistics and how they should be arranged to be of the most service. Then, when it is known just what is wanted, the general practitioner should be educated to exactness in reporting deaths, for it is he who reports the most of the deaths.

The section agreed on the importance of this endeavor to secure uniformity of registration of vital statistics and general agreement in methods and passed a resolution endorsing this plan. The exact wording of the resolution is not given in our telegraphic report. It will be given in a later issue.

Section on Surgery and Anatomy.

Dr. James E. Moore, Minneapolis, chairman of the Section on Surgery and Anatomy, chose to present as the theme of his address before that section, "A Plea for Exploratory Operations." He urged that modern aseptic methods in the hands of experienced surgeons made an opening into the body justifiable for the sole purpose of determining just what condition was present. He made the plea with carefulness, lest he should give any encouragement to those who "rush in where angels fear to tread," and laid emphasis on the fact that most exploratory operations should be done only by the able surgeon, who is fully competent to know indications, to recognize conditions found and to immediately repair anything needing attention.

Prof. Adolph Lorenz was one of the distinguished foreigners present at the meetings of this section. He was introduced to the audience and made a few remarks.

Section on Diseases of Children.

Dr. John C. Cook, chairman of the Section on Diseases of Children, had copies of a little pamphlet for distribution to the members of that section in connection with his chairman's address, which was on the development and care of children. This pamphlet was a catalogue of the various articles on pediatric subjects that have appeared in American and foreign medical publications during the past year.

PHYSICIAN ON CANAL COMMISSION.

President Roosevelt Asked to See that Health Matters at the Isthmian Canal are thus Supervised.

A resolution was unanimously adopted Wednesday urging the President to name a reputable medical man on the Isthmian Canal Commission in order to insure energetic sanitary control and thereby avoid repetition of the enormous loss of life from preventable disease.

VIVISECTION.

Association Praises Work of Legislation Committee and Makes Memorial to Congress on the Subject.

The action of the Committee on Legislation in securing the defeat of the anti-vivisection bill in Congress was indorsed, and a resolution was adopted memorializing Congress to give no further attention to the subject.

OTHER NEW ORLEANS MEETINGS.

Association of American Medical Colleges Meets and Raises Medical College Standard.

At the annual meeting in New Orleans, May 4, the report of the committee on requirements for admission to medical colleges was adopted, after amendment, by the Association of American Medical Colleges. It now requires four full years of work in the high school or its equivalent for eligibility to admission in a medical college.

The American Association of Medical Editors was also in session, and elected Dr. Sajous of Philadelphia president.

The Southern Medical College Association, also meeting at New Orleans, re-elected Dr. Christopher Tompkins of Richmond president. It will meet in Birmingham, Ala., next year.

FULL REPORT OF THE SESSION.

Minutes to Appear Next Week—Proceedings of House of Delegates.

As stated above, the publication of section papers will begin in THE JOURNAL next week. No attempt is made to give an account of the session in this issue, owing to the fact that THE JOURNAL goes to press on Wednesday. It is felt that the readers will appreciate receiving their copies at the usual time this week instead of waiting for an issue delayed for further telegraphic reports. Next week's issue will contain a full account of the New Orleans session.

The Board of Trustees and the Committee on Prophylaxis of Venereal Diseases made their reports to the House of Delegates. These appear in full below.

Revised Code Adopted—Atlantic City Next Session.

By telegram Thursday afternoon: The revised Code was unanimously adopted amid great enthusiasm. Atlantic City was selected as the meeting place for 1904.

Report of the Board of Trustees of the American Medical Association for the Year 1902.

To the Officers, Members and House of Delegates of the American Medical Association:

Your Board of Trustees, in complying with the requirements of your Constitution and By-Laws, beg leave to submit the following as our annual report.

Last year we presented you as Exhibit "A" the Auditor's "Balance Sheet" made from the books of the Association, including those of THE JOURNAL office, and of your Treasurer. This year, as Exhibit "A," we give you the cash receipts and expenditures taken from the monthly reports of THE JOURNAL office; Exhibit "B," your Treasurer's report, and to our report we append as Exhibit "C" the Auditor's "Balance Sheet."

RECEIPTS.

1902.	Journal Office.	Dr.
Jan. 1—Cash on hand		$ 522.10
Dec. 31—Cash from:		
	Advertisements	69,340.55
	Subscriptions	41,570.48
	Reprints	3,115.00
	Sales	1,268.30
	Buttons	336.00
	Binding	120.30
	Jobbing	2,126.75
	Electros	131.38
	Postage	49.42
	Section reports	294.00
	Sundries	20.65
	Interest	3.57
	Loss and gain account	43.80
	Requisition on Treasurer	11,000.00
	Total receipts	$130,021.30

DISBURSEMENTS.

1902.	Journal Office.	Cr.
Dec. 31, by amount paid for:		
	Second class postage	$ 8,595.63
	Stamps	3,701.89
	Salaries	13,966.60
	Pay roll	32,350.05
	Rent	1,633.36
	General expenses	2,282.46
	Electric power	969.49
	Traveling expenses	160.30
	Commissions on subs. and adv	5,978.61
	Journal stock	34,362.00
	Miscellaneous stock	2,930.76
	Binders	61.00
	Binding	441.15
	Building supplies	34.79
	A. M. A. express charges	185.97
	Sundries	8.55
	Machinery supplies	795.81
	Electros	1,017.17
	Type	247.41
	Ink	1,732.65
	Metal account	247.31
	Buttons	341.34
	Exchange	228.50
	Collection fees	55.30
	Subscriptions refunded	77.80
	Advertising	6.66
	Office furniture, etc	222.20
	Press room furniture, etc	13.50
	Electric motor	122.50
	Postmaster inc. dep.	15.00
	Carried to loss and gain	235.00
	Editorial news and rept	5,740.70
	Transfers to Treasurer	10,706.83
	Balance cash on hand	535.01
	Total credits	$130,021.30

EXHIBIT "B."

H. P. Newman, Treasurer, in account with American Medical Association.

1902	Dr.
Jan. 1—Cash on hand, per report	$ 30,760.48
March 1—Amount from sale of Government Bonds for value $10,000.00	11,075.00
June 1—Registration fees, Saratoga meeting	3,375.00
Nov. 1—Int. on $14,000.00 Chicago School Bonds	560.00
Dec. 31—Membership fees for year exclusive of registration at Saratoga	55,805.00
Dec. 31—Amount from rents, A. M. A. property	1,464.65
	$103,040.13

DISBURSEMENTS.

1902. Real Estate Account.		
To amount paid for:		
Five houses and lots	$42,646.96	
Survey of property	50.00	
Building Journal office	30,350.00	
Architect's fees	1,500.00	$ 74,546.96

Betterments Account.		
Cleaning and repairing houses	$ 42.15	
Water tax	7.24	
Allowance, rents, obstructing street	214.50	
Commissions on rents	10.40	
Repairs on furnaces	40.00	
Painting on houses	8.00	
Plumbers' account	3.95	
Photo. A. M. A. property	15.50	$341.74

Expenses of Treasurer's Office.	
Honorarium Treasurer	$ 1,000.00
Treasurer's clerk	962.00
Sundries for office	76.53
Premium on Treasurer's bond	100.00
Premium on clerk's bond	50.00
Postage, Treasurer's office	610.00

Safe for Treasurer	$ 24.00	
Nat. Deposit Co., trustee of bonds.	10.00	
Safety box rent	10.00	$ 2,842.53

General Expenses.

Auditing books	$ 200.00	
Attorney's fees	370.25	
Expenses, trustees, Chicago meet.	550.88	
Trustees' expense account	21.60	
Charges on drafts	48.70	
Card index	4.37	
Protest on draft	3.10	
Cutting and perforating cards	1.15	
Telegrams	1.06	
Certificates, 1903	75.00	
Polk's Directory	10.00	
Dues refunded	30.00	
C. M. Taylor messenger service	14.80	$ 1,330.91

Expenses Saratoga Meeting.

Expenses trustees and officers	$ 1,247.34	
Sal. Secy. Board of Trustees	50.00	
Printing acct., Saratoga meeting	6.00	
Stenographers, Saratoga meeting.	1,474.41	
Registration cards, Saratoga	2.27	
Special R. R. agt	23.00	
Badges for delegates	36.00	
Exp. Pathologic Exhibit	375.30	$ 3,214.32

Expenses of Committee.

To amount paid for:		
Exp. Committee on Reorganization	$ 360.40	
Exp. Committee on Arrangements.	55.79	
Exp. Com. on Local Registration.	263.54	
Exp. Committee on Legislation	661.70	
Committee on Transportation	36.16	$ 1,377.59

Machinery Account.

Folder Journal office	$ 2,148.55	$ 2,148.55
Subscriptions transferred		$ 350.00
On requisition		11,000.00
Balance cash on hand		$ 5,887.53
		$103,040.13

SUMMARY.

Dec. 31, 1902—		
Bal. cash in hands of Treas	$ 5,887.53	
Bal. cash in hands, Journal office.	535.01	
Chicago City School Bonds, par value $14,000.00, worth	15,168.13	
Amount invested in real estate	74,546.96	
Inventory acct. shown by auditors	35,683.53	$131,821.16
Dec. 31, 1901—		
Assets as shown by auditors	$87,839.91	
Dec. 31, 1902—		
Miscellaneous account payable	3,840.69	
Balance net profit, 1902	40,140.56	$131,821.16

A comparison of this summary with the statement made at the Denver meeting will show the great growth made financially by the Association in the short period of five (5) years.

At Denver your Treasurer reported total cash received from members for the year, $32,200.00.

Receipts for 1902 from same sources, $59,180.00, showing a gain of $26,980.00, indicating but little short of twice as many members.

The total amount of cash in your Treasurer's hands was $17,092.85, which included the then reserve for building purposes of $3,000.

The tables above show cash, etc., on hand, $21,590.67, being a gain in cash of $4,497.82, and a building on which we have spent $74,546.96, a gain of 71,546.96 over the reserve funds.

Our total Journal business, including cash in hand, as shown by the report of the Trustees for 1898, was $47,140.07.

This year the books of The Journal office show in cash $130,021.30, which amount includes $9,000 less in requisitions, but, not considering that, the face of the books show a gain of $82,891.23 in business over 1898, the gain being almost double the total business reported that year.

Last year (1902) report for year 1901 showed net assets $87,839.91.

This year, deducting balance due on property, our net assets are as follows:

Real estate, etc	$ 74,546.96
Furniture and fixtures	2,351.70
Machinery	17,174.40
Chicago City School Bonds	15,168.13
Inventories, paper, ink, etc	2,407.67
Bills receivable	901.67
Accounts receivable (earned)	12,848.09
Cash on hand and in bank	6,422.54
Total, 1903 report, for year 1902	$131,821.16
Excess over 1902 report	$ 43,981.25
Less miscellaneous account payable	3,840.69
Net profit	$ 40,140.56

REAL ESTATE.

1902—		
Amount paid for house and lot	$42,646.96	
Amount contract in full for Journal office	40,018.30	$ 82,665.26
Amount paid for houses and lot	$42,646.96	
Amount paid on building account	31,900.00	
	$74,546.96	
Dec. 31, 1902—Balance due	8,118.30	$ 82,665.26

EXHIBIT "C."

Jan. 27, 1903.

E. Fletcher Ingals, Esq., American Medical Association, Chicago.

Dear Sir:—In accordance with your instructions, we have examined the books of The Journal of the above Association and such records as were available in the office of its Treasurer, and we beg to hand you herewith statements of: Assets and liabilities as at Dec. 31, 1902; profit and loss account for the year ending Dec. 31, 1902.

We have examined vouchers or other evidence for all cash disbursements and have verified the cash in bank as shown by the above statements with statements furnished by the banks.

We found the books of The Journal to be neatly and accurately kept.

Yours faithfully,
The Investors' Audit Company.
(Signed) E. M. Mills, Manager.

AMERICAN MEDICAL ASSOCIATION.

Balance Sheet, Dec. 31. 1902.

ASSETS.

Real estate and buildings		$ 82,665.26
Machinery		17,174.40
Furniture and Fixtures:		
Press room	$ 788.30	
Office of Journal	1,523.90	
Office of treasurer	39.50	2,351.70
Chicago city school bonds, par value	$14,000.00	15,168.13
Inventories of paper, ink, type, metal, binders and buttons		2,407.67
Bills receivable		901.67
Accounts receivable	$39,197.70	
Less reserve for unearned advertising	26,349.61	12,848.09
Cash in bank and on hand		6,422.54
		$139,939.46

LIABILITIES.

Accounts payable:		
For new building	$ 8,118.30	
Miscellaneous	3,840.69	$ 11,958.99
Surplus:		
Balance as to Jan. 1, 1902	$87,839.91	
Add net revenue for the year as per account annexed	40,140.56	127,980.47
		$139,939.46

AMERICAN MEDICAL REVENUE ACCOUNT FOR THE YEAR.

PUBLICATION EXPENSES.

Inventories of paper, ink, type and metal, Jan. 1, 1902	$ 2,550.03	
Purchases of paper, ink, type and metal	41,073.99	
Pay rolls	32,350.05	
Electros	940.76	
News reporting and editorials	5,770.55	
Binding	149.00	
Machinery repairs and supplies	723.36	
Advertising and sub. commissions	5,750.85	
Postage, first and second class	11,805.95	
Salaries	13,966.60	
Rent	1,633.36	
Power	969.49	
General expenses	3,474.34	
Traveling expense	160.30	
Exchange	228.50	
Collection fees	422.55	
Office jobbing	660.90	
Building supplies	34.79	
Advertising transportation	736.05	
Interest and Discount	1,050.47	
Bad debts and miscellaneous losses	562.00	
Depreciation of machinery, furniture and fixtures, estimated	2,165.10	$127,178.99

GENERAL EXPENSE.

Treasurer's honorarium	1,000.00
Expenses Saratoga meeting	4,821.73
Expenses of committee on legislation	661.70
Premium on treasurer's bond	150.00
Auditing accounts	200.00
Salaries treasurer's assistants	962.00
Postage	610.00
Salary of secretary board of trustees	50.00
Miscellaneous expenses	1,720.21
Membership commissions	264.70
Net revenue for the year ending Dec. 31, 1902	40,140.56
	$177,759.79

ASSOCIATION, ENDING DEC. 31, 1902.

Membership dues	$55,455.00	
Subscriptions	30,863.65	
Advertisements	76,046.83	
Registration fees—Saratoga meeting	3,375.00	
Rents of association properties	1,464.65	
Reprints	3,008.55	
Miscellaneous sales	1,511.00	
Jobbing	2,733.38	
Buttons	149.71	
Binders	75.90	
Interest on bonds	560.00	
Profit on sale of government bonds	262.50	
Inventories of paper, ink, type and metal, Dec. 31, 1902	2,253.62	$177,759.79

COMPARISONS.

A comparison of the tables presented from the monthly report, "A" and "B," with the Auditor's report, shows apparent but not real differences, which have arisen from the system of bookkeeping which has been in vogue up to this time, but will not appear in the future. It will be sufficient to note a few points.

On the last page of the Auditor's report, "membership dues" is given as $55,455, while in Exhibit "B" it is given as $55,805. This arises from the fact that the Treasurer charges himself with $350, which he afterwards turned over to THE JOURNAL office as subscriptions, and when this $350 is deducted it leaves "membership fees" as given in Auditor's report. Again, on the same page of Auditor's report you note subscriptions $30,863.65, while in Exhibit "A" this same item is given as $41,570.48, but this amount includes an item of $10,706.83 collected by THE JOURNAL office, and afterwards passed to "membership dues," and when it is deducted we find the balance as shown by Auditor's report, $30,863.65, but it was necessary to enter, as shown *in Exhibit "A," to keep entries correct, and* you find in the credit side of "A" the amount, $10,706.83. You find on the same sheet of the Auditor's report "advertisements" $76,046.83, whilst Exhibit "A" shows only $69,340.55, the difference between the two, $6,706.28, being the amount earned on contracts not expired, and, hence, not collected at that time. Other items differ because of different combinations, but the result, as shown by the net profit, is the same.

The changes made in bookkeeping, by which all collections will be made through THE JOURNAL office, except interest on investments, will prevent all the difference to which reference has been made, except when the Auditor's report combines items differently from the way in which they are presented in our monthly reports. The change thus made will result in your Treasurer being the custodian of your surplus funds, and also of all invested funds, and the interest arising therefrom, and not a collector of anything. This consolidation of work and change in bookkeeping will save to the Association clerks' wages in the Treasurer's office.

AMERICAN MEDICAL ASSOCIATION.

Comparative statement for the years from 1895 to 1902 (inclusive):

1895—Membership fees for the year	$19,760	
Registration fees at Baltimore meeting	4,610	$23,370
1896—Membership fees for the year	$23,130	
Registration fees at Atlanta meeting	2,945	$26,075
1897—Membership fees for the year	$24,620	
Registration fees at Philadelphia meeting	7,580	$32,200
1898—Membership fees for the year	$28,945	
Registration fees at Denver meeting	4,815	$33,760
1899—Membership fees for the year	$32,840	
Registration fees at Columbus meeting	6,125	$38,965
1900—Membership fees for the year	$40,550	
Registration fees at Atlantic City meeting	6,150	$46,700
1901—Membership fees for the year	$46,505	
Registration fees at St. Paul meeting	5,050	$51,555
1902—Membership fees for the year	$55,805	
Registration fees at Saratoga meeting	3,375	$59,180

Dec. 31, 1901—Number of members	11,121		
Dec. 31, 1902—Number of members	12,540		1,419
Dec. 31, 1901—New members during the year	1,722		
New members at St. Paul	232	1,954	
Dec. 31, 1902—New members during the year	1,962		
New members at Saratoga	109	2,071	117
Dec. 31, 1901—Number of discontinuances for the year	674		
Dec. 31, 1902—Number of discontinuances for the year	547		127
Number of three-year delinquents Jan. 1, 1902			169
Number of three-year delinquents Jan. 1, 1903			159
Number of two-year delinquents Jan. 1, 1902			322
Number of two-year delinquents Jan. 1, 1903			298
Number of one-year delinquents Jan. 1, 1902			1,293
Number of one-year delinquents Jan. 1, 1903			1,513
Dec. 31, 1901—Membership fees paid during year	$51,555		
Dec. 31, 1902—Membership fees paid during year	58,800		$7,245
Cash collected during January, 1902	$17,625		
Cash collected during January, 1903	21,485		$3,860

ADVERTISING.

The amount actually earned from avertising during the year was $76,046.83, an increase of $13,813.47 over 1901.

Table 1, enclosed, shows comparative statement of the increase in advertising, cash collections, for the past five years, which indicates a gain of $9,898.73 for 1902 over 1901. The table represents actual collections, and is given only for a comparative basis.

During 1902 THE JOURNAL carried 3,046 advertising pages; of these 199 were for officers of the Association, the Contents and Digest, Journal, Association, State and National Society Announcements, Application Blanks, etc.

Advertisements to the amount of at least $8,000 have either been refused or dropped as being unacceptable to THE JOURNAL'S pages. We call attention to this fact to show that we are endeavoring to keep our advertising pages as clean as possible.

ADVERTISING DEPARTMENT.

The following comparative statement indicates the increase in advertising collections during the past four years:

	1898.	1899.	1900.	1901.	1902.
Jan.	$2,061.98	$3,292.84	$4,581.42	$5,998.63	$6,967.05
Feb.	2,415.67	2,391.65	3,133.42	4,829.22	4,617.17
March	1,557.51	2,763.23	2,701.08	3,657.68	4,936.53
April	2,603.23	2,595.11	4,431.01	5,620.98	6,842.31
May	1,095.43	3,240.89	3,238.98	4,915.41	5,522.46
June	1,568.44	2,343.75	2,665.99	3,715.91	5,341.44
July	2,689.05	3,453.41	3,764.67	6,683.78	7,580.32
Aug.	1,187.84	2,698.22	3,175.84	3,505.33	4,167.41
Sept.	1,635.44	2,093.68	2,953.72	3,923.05	4,501.35
Oct.	3,350.31	3,891.30	5,869.39	7,164.00	7,796.05
Nov.	1,719.96	2,734.25	4,116.64	4,807.84	5,276.18
Dec.	1,735.85	2,262.49	3,428.54	4,619.99	5,792.28
	$23,629.71	$33,760.82	$44,060.70	$59,441.82	$69,340.55

Indicating a gain for 1899 over 1898 of	$10,131.11
Indicating a gain for 1900 over 1899 of	10,299.88
Indicating a gain for 1901 over 1900 of	15,381.12
Indicating a gain for 1902 over 1901 of	9,898.73

SUBSCRIPTION DEPARTMENT.

The following figures indicate the gross issue of THE JOURNAL each week during 1902:

Weekly Edition.		
Jan. 4	24,125	
Jan. 11	24,150	
Jan. 18	24,100	
Jan. 25	24,150	96,525
Feb. 1	24,175	
Feb. 8	24,150	
Feb. 15	24,025	
Feb. 22	24,415	96,765
March 1	24,683	
March 8	24,417	
March 15	24,364	
March 22	24,375	
March 29	24,400	122,279
April 5	24,340	
April 12	24,319	
April 19	24,349	
April 26	24,400	97,408
May 3	25,200	
May 10	31,182	
May 17	25,180	
May 24	25,105	
May 31	25,100	131,767
June 7	25,770	
June 14	25,303	
June 21	25,320	
June 28	25,310	101,703
		606,447

Weekly Edition.		
July 5	25,000	
July 12	25,100	
July 19	24,894	
July 26	24,875	99,869
Aug. 2	24,854	
Aug. 9	24,847	
Aug. 16	24,858	
Aug. 23	24,851	
Aug. 30	25,164	124,574
Sept. 6	25,265	
Sept. 13	24,963	
Sept. 20	25,380	
Sept. 27	25,185	100,793
Oct. 4	24,950	
Oct. 11	25,375	
Oct. 18	25,878	
Oct. 25	27,000	103,203
Nov. 1	27,000	
Nov. 8	26,922	
Nov. 15	27,000	
Nov. 22	26,637	
Nov. 29	26,450	134,009
Dec. 6	26,900	
Dec. 13	26,900	
Dec. 20	27,000	
Dec. 27	27,000	107,800
		670,248

Grand Total	1,316,695
Weekly Average	25,321

The total number of copies used during 1901 was 1,146,575. indicating an increase of 170,120.

The following is the detailed count of the mailing list by states, indicating the gains and losses in members and subscribers for the year 1902:

State.	Members.	Sub. scribers.	Totals.	Gain for Year.	Loss for Year.
Alabama	97	165	262	37	...
Arkansas	119	136	255	52	...
Arizona	25	26	51	27	...
Alaska	...	2	2	1	...
California	426	223	649	131	...
Canada	6	92	98	32	...
Cuba	3	4	7	1	...
Colorado	297	108	405	..	14
Connecticut	173	113	286	12	...
Delaware	28	16	44	5	...
North Dakota	66	52	118	18	...
South Dakota	69	97	166	17	...
Dist. of Columbia	137	246	383	170	...
Florida	71	60	131	51	...
Georgia	156	265	421	..	29
Illinois	1,272	1,629	2,901	329	...
Indiana	521	489	1,010	..	5
Idaho	26	29	55	23	...
Indian Territory	29	96	125	17	...
Iowa	543	442	985	18	...
Kansas	162	251	413	53	...
Kentucky	234	299	533	10	...
Louisiana	120	181	301	41	...
Maine	84	31	115	4	...
Maryland	234	448	672	230	...
Massachusetts	482	265	747	229	...
Michigan	458	721	1,179	346	...
Minnesota	422	263	685	41	...
Missouri	368	574	942	105	...
Mississippi	79	109	188	13	...
Montana	58	48	106	5	...
New Mexico	25	23	48	13	...
Nevada	10	11	21	10	...
Nebraska	199	187	386	47	...
New Hampshire	87	42	129		10
New Jersey	370	179	549	40	...
North Carolina	130	109	239	80	...
New York	967	622	1,589	317	...
Ohio	936	691	1,627	69	...
Oklahoma	51	112	163	43	...
Oregon	99	73	172	18	...
Pennsylvania	1,355	572	1,927	75	...
Rhode Island	79	61	140	..	...
South Carolina	65	143	208	49	...
Tennessee	188	308	496	..	41
Texas	243	483	726	..	1
Utah	53	29	82	25	...
Virginia	164	222	386	79	...
Vermont	78	17	95	14	...
Washington	114	96	210	34	...
West Virginia	113	112	225	67	...
Wisconsin	408	428	836	146	...
Wyoming	21	22	43	5	...
U. S. Army	...	249	249	..	48
U. S. Marine Hosp.	...	30	30	3	...
Hawaiian Islands	10	6	16	2	...
Mexico	8	19	27	2	...
Philippine Islands	10	7	17	1	...
Porto Rico	1	4	5	1	...
Foreign	14	41	55	16	...
	12,553	12,378	24,931	3,177	148

The figures given below indicate the count of the mailing list Jan. 1, 1903, compared with that of Jan. 1, 1902:

	Jan. 1, 1902.	Jan. 1, 1903.
Copies to members	11,107	12,553
Copies to subscribers	10,795	12,378
Copies to advertisers	272	332
Copies to exchanges (domestic)	140	150
Copies to exchanges (foreign)	47	64
Copies to medical colleges and libraries	117	114
Copies to subscription agents	72	81
	22,550	25,672

Indicating an increase for the year 1902 over 1901 of 3,122.

The following is a comparative statement of the net subscription collections for the years 1898, 1899, 1900, 1901 and 1902:

	1898.	1899.	1900.	1901.	1902.
Jan.	$576.31	$1,094.46	$3,614.08	$4,911.89	$7,575.03
Feb.	605.61	525.25	1,167.24	1,991.31	2,308.44
March	502.55	952.76	1,388.89	1,996.65	1,954.52
April	419.90	741.27	1,719.06	3,122.78	4,660.65
May	389.32	669.93	1,585.90	2,062.42	2,230.02
June	442.00	733.05	1,334.75	1,431.93	2,250.85
July	964.90	1,851.73	3,456.32	6,011.47	6,077.21
Aug.	638.18	1,208.38	1,246.03	1,974.59	2,337.87
Sept.	546.91	798.36	1,273.91	1,707.95	1,995.61
Oct.	623.33	1,313.20	3,285.49	4,152.10	4,355.48
Nov.	434.64	920.71	1,784.12	2,270.10	2,953.37
Dec.	602.90	1,474.42	1,872.14	2,160.26	2,871.43
	$6,746.55	$12,283.52	$23,697.03	$33,793.45	$41,570.48

Indicating a gain for 1899 over 1898 of	$ 5,536.97
Indicating a gain for 1900 over 1899 of	11,408.51
Indicating a gain for 1901 over 1900 of	10,096.42
Indicating a gain for 1902 over 1901 of	7,777.03

In this connection we beg to call attention again to two items in the Auditor's report: (1) Membership dues is given as $55,455; (2) subscription is given as $30,863. It is only fair that we should say that of this $55,455 The Journal collected and transferred $10,706.83. Of this amount $2,364.93 was for old members; $3,105 was for new members, which had been obtained through our traveling men, by circular letters, etc., and $5,236.90 was *for subscribers* that were transferred to the membership list. In other words, The Journal office should be credited with $8,341.90 more than the amount given by the Auditor's report, as this amount was paid to the Treasurer for new members *obtained through* work done in The Journal office.

As mentioned last year, our subscription account is practically a clearing-house for membership. Subscribers are urged to become members as fast as possible. With each receipt for subscription a letter is enclosed by the Editor suggesting that the subscriber join the Association. This accounts for the difference in the percentage of collections from subscribers and *members.*

As shown above, last year there was transferred $10,706.83 to the Treasurer. In addition to the amount collected at The Journal office, quite a number of subscribers who became members during the year, paid direct to the Treasurer. For every name transmitted The Journal office handed the Treasurer $5, and there is quite an expense attached to these transfers, for which The Journal receives no credit, since The Journal had paid agent's commission for securing the orders, in addition to giving The Journal free for three months.

On Dec. 30, 1902, the Treasurer handed in a list of 158 names of those who were delinquent members for the years 1900, 1901 and 1902, to be dropped from the mailing list. Two letters, *one on January* 7th and another on the 17th, were sent to these members, urging those to whom they were addressed to retain their membership. To date we have collected from 47 of these delinquents the amount of $462.50. These have since been restored *to our* mailing list, and the amount turned over to the Treasurer, leaving still 111. On February 11 another letter was sent to these delinquents.

PAPER STOCK.

Following is the cost of paper stock for the past three years:

1900.	1901.	1902.
$25,598.00	$29,835.00	$35,675.06

This shows a gradual rise each year, but, as the price was the same, the rise is accounted for in the increased circulation.

The following table shows the total number of copies issued each year, total pages, and amount of paper stock used:

	Total No. Copies.	Pages.	Reams.	Lbs. of Paper.	Tons.
1898	597,282	4,756	3,395	321,525	157.0
1899	710,950	5,382	4,832	461,420	230.0
1900	907,200	6,087	6,747	607,230	303.5
1901	1,146,575	6,510	9,052	814,680	407.0
1902	1,316,695	6,522	10,430	938,700	469 1/3

As will be noticed, the increase, in round numbers, of 1902 over 1901 was 62 tons.

Our mailing lists of 25,672 names on Jan. 1, 1903, show that our Editor has given us a journal mailed to more than 25,000 persons. This was scarcely considered possible five (5) years ago, but it should now be regarded as a starting point, *a locus a quo,* to a bona fide circulation of 100,000. This can be attained in the next decade at furthest, if every member of the Association will do his duty. If the secretary or president of each county society in every state can be induced to regard it as one of his duties to lay before his organization the claims of The Journal as the organ of the whole profession of these United States, and impress on the members that it is not only their privilege but their duty, a duty owed the regular medical profession of our common country, to subscribe for and support it, new names will be added to the list of members, not by tens, but by hundreds. There should be an honest and earnest rivalry in the profession of the different states to show the greatest percentage of gain in subscribing for The Journal. To aid in carrying out this idea, your Board of Trustees, being impressed more, if possible, than ever before with the necessity of promptly pressing to a successful termination our plan of reorganization, secured the services of Dr. McCormack of Kentucky, who is to visit the different state societies and as many county medical societies as possible up to the May session of the Association, and present the matter clearly to them.

This action of the board was also necessitated by the fact that our Editor was being overworked and needed to be relieved of labors not belonging to his editorial department, that he had cheerfully done, up to the point where he could go no further, and yet the work could not be dropped. The Journal is worthy of the support of every member of the profession, be he a physician in our largest city or an humble practitioner in a most remote corner of some small county. Each one can find in its pages thoughts and suggestions adapted to his individual needs. The Journal is in no sense the organ of any specialty. Its pages are open to all, but contributions to be accepted must show thought, not mere book papers, which could be read more easily in the originals from which they have been culled.

PRESSROOM AND OFFICE FURNITURE AND FIXTURES.

There was spent under this head in 1902 $259.70, but for 1903 *still further expenses will have to be incurred in furnishing our* new building, but when once made, since they are placed where there will be no need of moving, they will last for years, and soon the expense under this head will be nominal.

PLANT.

The machinery account as presented by the Auditor foots up $17,174.40 (last year the inventory showed $16,808.25), after adding a folder costing $2,148.50 and a motor $122.50, total additions $2,271, showing a deduction of about 10 per cent. for depreciation from use.

This inventory does not include two (2) large new presses, costing about $9,000, and two (2) automatic feeders, costing $2,750, which have been bought and placed in the new building, but have not been accepted; nor several electric motors, costing $1,200, for the same reason Total new machinery bought, but not accepted Jan. 1, 1903, but to be paid for when accepted and working satisfactorily, $12,950. Your Board of Trustees ordered *the purchase of a new linotype machine. When this is installed* night work will not be needed in the office. During the past year it was frequently necessary to have one or more of the linotype machines run overtime and at night, adding materially to the expenses of The Journal. This can now be avoided.

PRESSROOM FURNITURE AND FIXTURES.

Many additional conveniences under this head have been added since The Journal moved into its permanent home. The report of last year referred to the fact that in its then quarters The Journal was much hampered for space in which to transact its business, as needed conveniences could not be added. In our new building all these conditions are changed, and gradually everything necessary to the economical running of a first-class plant is being installed. We do not deem it necessary to publish in this report an inventory of all our fixtures and furniture. Suffice it to say that, whereas the inventory presented at the Denver meeting occupied a space of fifteen (15) lines in the report, a full page would be needed for this. I would call attention to only one item. The Denver report showed three (3) Miehle presses and one (1) Gordon press. We now have two (2) double and three single Miehle presses, and one Gordon and one Universal press, more than double what we then had. The change is greater in every other portion of the office.

Besides these two large presses, we have three single, presses, so that in case of failure of either of the large presses, we could still get out The Journal without much crowding.

Hence, our press facilities are practically perfect and give us an opportunity to do much work that has heretofore been out of the question. Further, it will enable us to get out our reprints within a reasonable time, as well as the Transactions of the various Sections and other work.

OFFICE FURNITURE AND FIXTURES.

Additions have been made to this department also, but as they were made since Dec. 31, 1902, they do not belong in this report. The office is now up to date.

LIBRARY ROOM.

On the third floor the front room has been arranged for a library. In it will be found the latest books, etc., sent to The Journal for review, etc. It will be used as a reading and reception room, where members of the Association will always be welcomed by the Editor. In this room will be held the meeting of your Board of Trustees from year to year.

The whole building is a credit to any organization, and the arrangement of the building in its relations to the balance of the property is such that it can be added to at any time that there should arise any demand for more space.

RESIDENCE PROPERTY.

It must not be forgotten that we own, in addition to our Journal building, three (3) residences on ground sixty by eighty feet. These we rent for about $140 per month, yielding us an annual rental of about $1,600, which we hope to increase to $1,800, being about 4 per cent. on the original purchase money for the five lots and houses. Instead of being compelled to pay out about $5,000 for rent, as we would have had to do for room enough to carry on our Journal work, we not only pay out nothing, except for taxes and insurance, but we receive an income of at least $1,600 from our own rents, making a difference of $6,600 to offset the interest on our investment, $82,665.26. For one to have suggested five years ago the possibility of this consummation of our hopes and wants, he would have been considered a veritable Colonel Sellers, and yet the profession of regular medicine now has its home, a building of which none of us need be ashamed. But while we present to you this pleasant picture, we do not wish you to imagine the work is completed. Much yet remains to be done. The success of your Journal depends as much on the future as the past, probably more. You have simply laid a foundation sufficiently broad on which you can build a superstructure in a journal of which the whole medical profession can be proud.

To make it a success there must be, as in all other enterprises, money behind it to tide it over any emergency. A successful bank lays up a reserve fund of undivided profit. Manufacturing enterprises do the same; so, too, must the American Medical Association begin to lay up judiciously a sum of money for future use The minimum of this fund, in the estimation of your Board of Trustees, should be $100,000. Less than that will not do. Times of depression and stagnation in business must come. We appear to be floating now on a tidal wave of prosperity, but the ebb must just as surely be met. To do this as it becomes you, you must have this reserve fund. As a basis of this reserve fund, we have $14,000 in Chicago city school bonds, worth now a little over $15,000. We ordered the *local trustee, Dr. Ingals, to add to this sum, $6,000, so as to* make our investment $20,000. We would suggest that the Association be just as careful about its expenditures for the next five years as it has been in the past, and all will be well. A false step will blight what now appears to be the brilliant possibilities of your Journal. We do not mean that The Journal should not be improved. For that purpose money should be expended prudently, but freely. Your editor should be encouraged in every way to strive to keep The Journal to the forefront. More and better reading matter and less advertising matter about which any question could be raised should be a *sine qua non* in the conduct of your organ. Reference has already been made to the fact that advertisements have to be refused though the medicines presented in them are endorsed not by D.D.'s, but by M.D.'s who stand high. The manufacturers of proprietary preparations are fast learning that The Journal is living up to its rule of requiring the formula of every internal remedy advertised in its pages. The trend in regard to external remedies is in the same direction, though your board has not taken as decided and definite action in regard to them as we hope soon to do.

ACCOUNTS AND COLLECTIONS.

Several accounts for postage were presented during the year that has just passed, but as your board decided that the appropriation made at the Saratoga meeting could not be used to meet the expenses already incurred, none of them was paid, but the fund will be available for Section use at the New Orleans session. For these accounts to be promptly met, they must be presented to some member of the board by the third day of the New Orleans session, viz., May 7, 1903. If presented after that time they can not be properly audited and paid before the February meeting.

Your Board would report further that questions of the compensation of committees have been before us, but where there was no specific appropriation of money for their use, we have declined and will continue to decline to meet such requests. If the House of Delegates desires to expend money for committee work, as was done in the case of the Committee on Organization, we recommend that an appropriation not to exceed a definite sum be made, and then your Board of Trustees will have no trouble in adjusting all such claims. This has been your rule in reference to your Pathologic Exhibit, and we would ask that the same course be pursued in all such cases. For the reason that indefinite appropriations would have to be made (among many other as good or better reasons), your Board of Trustees would recommend that the exhibits at our annual meeting be left for the present at least under the control of the local committee, with a continuation of the restrictions already imposed, that no exhibit should be made of and for which advertisements would not be received for our Journal.

We feel that, whilst in many respects it would make the Association more independent in selecting a place for its annual session, yet it would appear undignified for us to be sending an agent to the place of meeting to arrange for halls of all kinds, and then to sell floor space to interested exhibitors, as would have to be done to save an enormous expense to the Association. All these things can be better done by the local profession, and we feel that, for the present, at least, the wisest course to pursue would be to keep in the beaten path, and go on as we have been doing till the Association has a sufficient reserve fund on hand with which to meet emergencies.

CODE OF ETHICS.

To avoid the possibility of an unnecessary expense, the Editor was directed not to print and send out, as he has done for several years, the "Code of Ethics" to medical students, in view of the fact that a special committee has under consideration a revision of the code, and are to report at our next annual meeting As changes may be made, we thought it would be better to await the action of the House of Delegates on the matter, and then have copies of the code printed and sent out.

NATIONAL INCORPORATION.

In regard to the question of a national incorporation, which would permit the American Medical Association to meet in any state or territory in the Union, to transact and complete its business without being compelled to hold an adjourned meeting in Illinois for the purpose of ratifying its acts done at the place of meeting, your Board of Trustees has considered it at much length. Much correspondence has passed and repassed between interested parties and various members of the board. All felt that if such an end could be attained, it certainly should be done. At our annual meeting the secretary of our board, Dr. Montgomery, arranged much of this correspondence, and presented it to us on the afternoon of the first day. The attorney, Mr. Baldwin, who had been advising with us, being present, by request, took part in the lengthy discussion of the question. At the end of the session, he was requested to take the correspondence, arrange and go over the same, and furnish an opinion which could be employed by the board as an explanation, should it decline to proceed in accordance with the requests made for them to act in this matter of national incorporation. We can arrive at no better way of presenting this matter so that it may be fully and clearly understood than by giving to the House of Delegates and, through you, to the whole Association, Mr. Baldwin's report verbatim. Whilst it is lengthy, it could not be well condensed without the omission of matters necessary to a clear comprehension of this mooted question. The sum and substance of this opinion is: (*a*) That the constitution and by-laws adopted at St. Paul had no binding force at all until they were readopted in Illinois; but the action had at Saratoga, and readopted in Chicago, is binding, and the charter and by-laws under which we are now acting are legal, since they were readopted in Illinois, where the Association is incorporated. (*b*) That a national incorporation such as is desired seems at present impossible. This communication constitutes Exhibit "D."

Respectfully submitted, E. E. MONTGOMERY, Secretary,
T. J. HAPPEL, Chairman, W. W. GRANT,
MILES F. PORTER, JOHN F. FULTON,
E. FLETCHER INGALS, H. L. E. JOHNSON,
W. S. RODMAN, A. L. WRIGHT, *Trustees.*

ADDENDUM: Your Board of Trustees would further report, that on March 31 the books of the Association showed your real estate account balanced—not a dollar being outstanding on any of our contracts. At that date we had on hand, including our Chicago City School Bonds, $39,427.23, but from this amount would have to be deducted unpaid bills for machinery not accepted at that time. We would recommend that the secretary of each Section of the American Medical Association be allowed the sum of $50 as compensation for services, postage, etc., annually, believing that this sum would enable the Sections to frequently retain an efficient secretary for a term of years. We would further recommend the following changes in the Association button: Leave the first "M" from the face of the button and make the bars plain, straight bars, instead of the present bars. We present you a model of this button and believe that it presents a neater appearance.

EXHIBIT "D."

LAW OFFICES, JESSE A. AND HENRY R BALDWIN,
CHICAGO, March 13, 1903.

To the President and Board of Trustees of the American Medical Association, care Dr. E. Fletcher Ingals, Chicago.

Gentlemen: On Friday, February 20, 1903, at your invitation, I attended a meeting of your board, held in this city, at which time there was discussed the propriety of certain of the by-laws of your Association, as well as the legality of their adoption, and the further, and perhaps more important question, whether or not your board ought to then proceed toward securing a national charter for the American Medical Association. You will remember that there were read at that meeting the following:

1. A letter from Dr. F. H. Wiggin to Dr. Simmons, dated November 18, 1902, raising the question whether the various changes made in the by-laws, at the meeting of the Association held in Saratoga, in 1902, and afterwards ratified at an adjourned session of that meeting, in Chicago, Illinois, were properly made, it being stated that such changes had not been proposed in conformity with the rules of the Association adopted at its meeting at St. Paul, June 5, 1901.

2. A letter from Dr. F. H. Wiggin to Dr. Johnson, as secretary of your Board of Trustees, dated November 19, 1902, raising substantially the same questions, and suggesting that the Association be incorporated "under the National Law."

3. A letter from Dr. F. H. Wiggin to Dr. Montgomery, dated December 8, 1902, criticising the method by which the changes in the by-laws had been made, quoting a portion of the law of the state of Illinois, and arguing that the changes which had been made in the articles of incorporation had not been made in conformity with the law of Illinois, and again suggesting that the Assocaition should "get a National incorporation rather than to continue its existence under the Illinois law."

4. Letter from Jesse A. Baldwin, Esq., to Dr. George H. Simmons, dated December 15, 1902, replying to objections made in the letters previously mentioned as to the method by which the changes had been made.

5. Communication dated December 22, 1902, from James Taylor Lewis, Esq., entitled "Opinion of the Counsel of the New York State Medical Association," addressed to Dr. Wiggin, criticising the conclusion reached in Mr. Baldwin's letter.

6. Letter from Jesse A. Baldwin, Esq., to Dr. Ingals, dated December 26, 1902, reporting that, at the request of Dr. Ingals, he had investigated to ascertain whether the American Medical Association could better accomplish its purposes by securing a National charter (if one could be secured), or by organizing under the laws of some other state or territory of the Union; and in which he advised, 1, that congress would have no power to create a National corporation for the purposes contemplated, by giving it a National charter; and 2, that, having communicated with the secretaries of state or attorneys-general of forty-seven states and territories, and having examined a large amount of printed and written matter, bearing on the corporation laws of the various states and territories, he was of the opinion that the proposed object sought to be accomplished, viz.: the right to hold its meetings, from time to time, and transact its business in any of the various states and territories of the Union, could not be secured by incorporating under the laws of any of the other states or territories. The letter further stated that while the laws of some of the states were more liberal in some of their provisions, with respect to corporations similar to our own, there were none in which the advantages offered were sufficiently superior to those granted by the laws of the state of Illinois, as to make them worthy of serious consideration; that in the letter from the Hon. Attorney General from Wisconsin, replying to my inquiry, he had said:

> I am very clear that the corporation could not be formed under our statutes, which would result in the general offices and the books and records being kept outside of the state. I also think it would be necessary to have the meetings for the transaction of business of the corporation, held in the state. Of course, this would not prevent other meetings being held for other purposes, in other states, but I think that the meetings of the stockholders and directors, for the transaction of business must be held here.

7. Extract from a letter from Dr. Simmons to Dr. Wiggin, dated Jan. 7, 1902, which does not relate to the subject matter, concerning which I was asked to advise

8. Letter from Dr. Wiggin to Dr. Montgomery, dated Jan. 9, 1903, in which Dr. Wiggin states that he sends with letter copies of opinions on the matter of the changes in the constitution or articles of incorporation of the American Medical Association at Saratoga; one being an argument sustaining their legality, from the counsel of the American Medical Association (myself), and the other questioning their legality, from the counsel of the New York State Medical Association (James T. Lewis, Esq.).

9. Copy of a letter signed by James T. Lewis, counsel, dated Jan. 16, 1903, addressed to Dr. Wiggin, president, New York State Medical Association, stating that there could be no possible question but that "the American Medical Association could be, and should be, incorporated under an act of congress," and, stating further, that "the case of McCulloch against the state of Maryland, 4 Wheat, 316, is the leading case and takes up and discusses the whole question and determines it finally" He further states that the "American Social Science Association" was thus incorporated, as also "The Jeanette M. Thurber Conservatory of Music," the charter for the former having been drawn up by Mr. Justice Simeon F. Baldwin, an able constitutional lawyer. The letter further says (referring to the opinion of your counsel, Jesse A. Baldwin, Esq., that congress has no power to incorporate the American Medical Association as a national organization, with rights to business anywhere in the United States), "The statement that it is impossible is absurd, I care not who makes such a statement." He further states that, in his judgment, there is but one course

to pursue, and that is to have the trustees of your Association forthwith apply to congress for a special charter, and have the Association "made a national body in fact," and further adds that he "would be glad to do it"

10 Letter from Dr Wiggin to Dr Montgomery, dated Jan. 21, 1903, evidently transmitting the previous letter to Dr. Montgomery

11 Letter from Dr. Wiggin, president New York State Medical Association, addressed to Dr. Montgomery, secretary of your Association, dated Jan. 31, 1903, in which he says that it seems clear to him that the alterations made in the articles of incorporation at the Saratoga meeting were improperly made (though the mistake was unintentional), because they had not 'been proposed in open meeting of the House of Delegates one year previous to being acted on," nor had they been "published at least three times in THE JOURNAL during the interim," etc, according to the provisions of the constitution or articles of incorporation adopted at the St Paul meeting, June 5, 1901, and quoting a part of the statutes of Illinois He suggests that the counsel for the American Medical Association (meaning myself) should not have taken advantage of the failure to file with the secretary of state of Illinois, as required by its laws, the constitution or articles of incorporation adopted at St Paul He also suggests that it would be wise for your board to secure a "national incorporation" rather than to continue its existence under the laws of Illinois, etc He says that "in case a national incorporation should be procured by a special act of congress, the House of Delegates could complete its business at its annual meeting, wherever it might be held" He further states that the only objection to this proposition which has been raised is that (raised by myself) the Association could not so incorporate, and he then refers to the McCulloch case, and mentions the incorporation of the American Social Science Association and the Jennette M. Thurber Conservatory of Music, and adds his endorsement to the deservedly high standing of Mr Justice Simeon F Baldwin, who drew up the "charter" for the American Social Science Association He expresses his belief that, whatever the expense and trouble incurred in procuring a national organization, it would be worth all it would cost "so to organize the American Medical Association that its interests may be carried on in future free from any disturbance from schemers and others who might seek their own, rather than the interests of the organization"

12 Letter from Dr. Wiggin to Dr Montgomery, dated Feb 10, 1903, offering to procure and send a copy of the charter of the American Social Science Association, and suggesting that Dr Montgomery look at the McCulloch case, 4 Wheat, 316, which Dr Wiggin says he is informed "discusses the whole question and determines it finally, and which your correspondent, the Hon O U Underwood, did not seem familiar with," and suggesting that Speaker Henderson be requested to look up the McCulloch case.

13. Letter from Dr. Wiggin to Dr. Montgomery, dated Feb 15, 1903, suggesting that your Board of Trustees appoint a committee to secure a national charter, with the help of Mr Lewis and one or two others

14 Letter from James Taylor Lewis, Esq, to Dr Montgomery, dated Feb 17, 1903, explaining why he can not send to Dr Montgomery a copy of the charter of the American Social Science Association, and adding that the attorney general has stated that he could not give any assurance that a charter could be secured during the then present congressional session, and suggesting extra effort on the part of the special committee of your board to procure this charter

15 Letter from Hon D B Henderson to Dr Montgomery, dated Feb 8, 1903, transmitting a letter from Hon O W. Underwood of Alabama, formerly a member of the House Judiciary Committee

16 Copy of a letter from Dr Montgomery to General Henderson, speaker, etc, dated Feb 4, 1903, stating that the American Medical Association is incorporated under the laws of Illinois, conducting a journal and owning property in Chicago, that a large part of its members is dissatisfied with the conditions which make it necessary that its transactions should be ratified by meetings held in Illinois in order to make them valid, and inquiring whether it would be possible to secure through congress a charter 'which would give us the privilege of holding our meeting in any state in the Union while still carrying on the business in Chicago I am told that the American Social Science Association has received a national charter through congress," and requesting Mr Henderson to inform him of the "method" by which he should proceed.

17. Letter from O W Underwood to Speaker Henderson, dated Feb 7, 1903, stating that Mr Henderson desired Mr. Underwood to write him "an opinion as to whether congress could properly grant such a charter" He then cites a paragraph from the opinion of Chief Justice Marshall, as follows.

> The power of creating a corporation, although appertaining to sovereignty, is not like the power of making war or levying taxes or of regulating commerce, a great substantive and independent power which can not be applied as incidently to other powers or used as a means of executing them It is never the end for which other powers are exercised but a means by which other objects are accomplished

The remainder of Mr Underwood's letter is as follows

> It is therefore clear that Congress may create corporations as a means of executing the other powers of government for instance, a bank for carrying on the fiscal operations of the United States or a railway corporation for the promotion of Interstate commerce, but unless the creation of the corporation is intended as a means of exercising, using or controlling some of the great powers dedicated to the federal government, there is clearly no authority for Congress to incorporate such a company
>
> From the statement contained in Mr Montgomery's letter I do not see wherein the incorporation of the company he proposes would come within the powers above mentioned and, therefore I do not believe that Congress would have power to incorporate this company Of course on the other hand, Congress has unlimited power to legislate for the District of Columbia, and would have power to incorporate a company for the purpose of doing business within the District of Columbia and incidentally it might transact its business throughout the United States as all other corporations do but such a charter would not be a general charter but would be local to the District and would have the same limitations on it that charters issued by the State Government have I return herein Mr Montgomery's letter

18 Letter from James Taylor Lewis, Esq, to Dr Montgomery, dated Feb 14, 1903, in which he states that he has read the opinion of Mr Underwood and the letters from Speaker Henderson, and that he can not see anything in either of them that goes to the point "except as an argument in favor of congress granting a charter to the American Medical Association" He adds:

> The Government has a Department of Education, and a Commissioner of Education, and it is along the lines of development in science and education that this corporation seeks federal recognition, and has a precedent granted in the charter granted the American Social Science Association, and the Jeanette M Thurber College of Music
>
> The learned remarks of Chief Justice Marshall are very apt in this connection because you are seeking a corporation which is to be the means of advancing and executing the educational branch of the Government, and this corporation should very properly receive recognition as a part of the educational system of the United States

He further adds that he is ready to be of any service in bringing about the securing of a charter, and is willing to present the matter to the attorney general or the president, and he adds, referring to the proposed charter, that "of course, it is a great concession by congress"

19 Letter from Dr. Lambert to Dr Montgomery, dated Feb 18, 1903, stating that Dr Wiggin and Mr Lewis had asked the writer to help obtain a national charter in case one should be applied for, and tendering his services.

20 Telegram from Dr Wiggin to Dr Happel, dated Feb 20, 1903, mentioning vol 30, U S Statutes at Large, page 804, as giving the charter of the American Social Science Association

After the foregoing communications had been read, I was called on to address the board with respect to the matters involved You will remember my statement made at that time, that the various modifications made in the articles of incorporation and by laws of the American Medical Association were advised in an honest effort on my part to utilize to the fullest degree possible the elaborate and (in the main) well devised and carefully worked out scheme of organization for the Association, and that I had advised only such changes as seemed to me necessary to make the organization legal under the laws of the state in which it had been incorporated long before I became its legal adviser; that at no time [illegible] there been any suggestion made to me by any person th[illegible] do more than this, that I confidently believed the obj[illegible] urged against the propriety of the legality of what h[illegible] done were based on a misapprehension of the situ[illegible] were due to a lack of accurate knowledge as to [illegible] the state of Illinois with respect to corpor[illegible] character

I am sure that the intimation of Dr Wigg[illegible] to Dr Montgomery, dated Jan 31, 1903 (No [illegible] the organization is in danger from sche[illegible] might seek their own rather than the inter[illegible] tion," is inadvertent, and can not be inte[illegible] insinuation that the able and honora[illegible] membership of the American Me[illegible] n[illegible]

The men who are, to the best of their ability, conducting the affairs of this Association, and endeavoring to make its existence and proceedings conform to the laws of the state of Illinois under which it is organized, are no more proper subjects of distrust and suspicion than would be the men prominent in the management of the New York State Medical Association, of which Dr. Wiggin is the honored president and James Taylor Lewis, Esq., the able counsel.

Assuming, as we are compelled to do, that the counsel for the New York State Medical Association is in error with reference to the corporation laws of the state of Illinois, and is in further error in supposing that congress could confer on you a national organization with the powers indicated, and that he would find (if he looked) that the American Social Science Association is, by the very act creating it, "constituted a corporation by that name in the District of Columbia," assuming all these things to be true, yet they do not afford sufficient reason for suspecting his motives, nor in any manner reflecting on him, other than to show that he is mistaken.

The contention that the amendments to the articles of incorporation (or constitution) and to the by-laws adopted at the Saratoga meeting, in 1902, and ratified at the adjourned session of that meeting, held in Chicago, were not properly adopted, because they were not severally proposed "in open meeting" one year previous to being acted on, nor published at least three times, etc., according to the so-called constitution and by-laws adopted at the St. Paul meeting, in 1901, is erroneous, because:

1. Corporations exist not by natural right, but because they are allowed by the sovereignty (state or national) creating them.

2. No sovereignty (state or national) can give to a corporation created by it, rights and privileges which can be exercised and enforced outside of the jurisdiction of the sovereignty (state or national) creating such corporation.

3. The American Medical Association was incorporated under the laws of the state of Illinois, in 1897. Its meetings for the transaction of business could only legally be held within the territorial limits of the state of Illinois. Therefore, the so-called constitution and by-laws supposed to have been adopted at St. Paul, Minn., were not valid, because not adopted at a meeting held within the state of Illinois.

The amendments to the articles of incorporation voted on at your Saratoga meeting, in 1902, and ratified at the adjourned session of that meeting held in Chicago, were properly made, because the state of Illinois permits such amendments to be made at any annual meeting or at any adjourned session thereof.

As to the propriety of the present by-laws permitting so small a number to constitute a quorum at the adjourned sessions, that is a matter which the Association must decide for itself. If the present number does not correctly represent the judgment of the Association, it should be changed. However, there is nothing in the by-laws to prevent any number, even to the full membership of the Association, attending the adjourned sessions. Nor can I think it probable, as seems to be feared, that even as small a number as constitute a quorum will be likely at such adjourned session to exercise bad faith toward the remainder of the Association.

On the question of a national incorporation, suggested by Dr. Wiggin and strongly urged by counsel for the New York State Medical Association, which Dr. Wiggin says should be procured by a special act of congress, at which "the House of Delegates could complete its business at its annual meeting, wherever it might be held," and which, in the language of the letter from Dr. Montgomery to Speaker Henderson, "would give us the privilege of holding our meeting in any state in the Union while still carrying on the business in Chicago," and in which the advocates have so repeatedly referred to the case of McCulloch vs. State of Maryland, 4 Wheaton, 316, as an authority, and the incorporation of "The American Social Science Association," as a precedent, I have to say:

First. As to the authority: McCulloch vs. State of Maryland, was a suit brought to recover a tax levied under "An act to impose a tax on all banks, or branches thereof, in the state of Maryland," etc., and was a direct attempt, on the part of the state of Maryland, to tax the business of a branch of the "Bank of the United States." The decision of the Supreme Court of the United States involved two questions:

1. Whether congress had constitutional power to incorporate the "Bank of the United States," and

2. Whether the state of Maryland might, without violating the constitution, tax a branch of that bank, located in the state of Maryland.

The case was argued by eminent counsel, including, among others, Mr. Webster and Mr. Pinkney, and the court decided:

1. That *congress has* power to incorporate a national bank, under that branch of the constitution which gives to congress the *power to lay and collect* taxes; to borrow money; to regulate commerce; to declare and conduct a war; to raise and support armies and navies, etc.; and

2. That the state of Maryland could not legally tax the branch of the "Bank of the United States."

This decision has been cited by the Supreme Court of the United States more than one hundred times, and in the various Federal Reports thirty-eight times, so that the case is not at all new or startling to a lawyer in active practice.

It is easy, however, to see a very distinct difference between the *incorporation of a* "Bank of the United States" and an association of this character. The constitution of the United States *confers on congress* the power to make laws respecting the coining of money, etc., and it is easy to see where the Supreme Court found authority for the position that the creation of this "Bank of the United States" was a fit instrumentality to carry into effect the powers distinctly conferred on congress *by the constitution*, but no such power has been conferred on congress with respect to educational institutions, churches or similar institutions.

Congressman Underwood was undoubtedly correct in denying that "congress would have power to incorporate" this Association. *He is also* correct in saying that, "on the other hand, congress has unlimited power to legislate for the District of Columbia, and would have power to incorporate a company for the purpose of doing business within the District of Columbia, and, incidentally, it might transact its business throughout the United States, as all other corporations do, but such a charter would not be a general charter, but would be local to the District, and would have the same limitations on it that charters issued by the state government have."

And now, a reference to the "American Social Science Association": On the 28th of January, 1899, an act of congress was approved, which reads, word for word, as follows:

> An Act to Incorporate the American Social Science Association.
>
> Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Daniel C. Gilman, Carroll D. Wright, Andrew D. White, Dorman B. Eaton, James B. Angell, William T. Harris, Frederick J. Kingsbury, Oscar S. Straus, Francis Wayland, Saint Clair McKelway, Simeon E. Baldwin, and their associates, members of the voluntary association organized in eighteen hundred and sixty-five and known as the American Social Science Association, and their successors, are hereby constituted a corporation by that name, in the District of Columbia, for the purpose of promoting studies and researches in social science in the various departments in which said association is or said corporation may be organized.
>
> Sec. 2. That this act shall take effect upon its acceptance by said voluntary association at its next regular annual session.
>
> Sec. 3. That the right to alter, amend, or repeal this act at any time is hereby expressly reserved.
>
> Approved, Jan. 28, 1899. 30 U. S. Statutes at Large (55th Congress, 1897-1899), page 804.

It will thus be observed that this act of congress provides that this American Social Science Association "are hereby constituted a corporation by that name in the District of Columbia," and it has, therefore, the same relative territorial limits to its rights and privileges that it would have if incorporated in any other territory or in any of the states of the Union; and, as stated by Congressman Underwood, "such charter would not be a general charter," but is "local to the district," and has "the same limitations on it that charters issued by the state government have."

I have never doubted that an association like ours could be incorporated, by act of congress, in the District of Columbia, but that would carry with it the same limitations with respect to the necessity of holding business meetings within the District of Columbia, that now make it necessary for them to be held in Illinois, and it is more than doubtful whether this would be any improvement over present conditions.

IN CONCLUSION.

The matters considered by your Board of Trustees at its meeting in Chicago on the 20th day of February, 1903, involved:

1. The suggestion that the present articles of incorporation and by-laws, as acted on at your annual meeting in Saratoga and ratified at the adjourned session of that meeting, in Chicago, were not legally adopted, because the changes had not been proposed and published in conformity with the rules of the Association, adopted at St. Paul, in the year 1901, in relation to amendments.

2. That the provisions of the by-laws, fixing a quorum at the adjourned session, permitted too small a number; and

3. That your board ought immediately to take steps to secure from congress a national incorporation, which would give it the privilege of holding your meetings in any state in the Union, and thus "complete its business at its annual meeting, wherever it might be held."

After extended discussion by you, and after you had listened to the presentation of the law applicable to the situation which, as counsel for your Association, I made, your Board of Trustees reached its conclusions with respect to the several propositions, and instructed me to prepare an opinion, setting out, in detail, the situation. This detail is furnished in the previous portion of this letter. A summary of the conclusions reached, with reasons as to each proposition, is as follows:

1. The amendments to the articles of incorporation and the by-laws, adopted at the Saratoga meeting, and ratified at the meeting in Chicago in 1902, are legal. The requirements above referred to—that they should have been proposed "in open meeting" one year previous to being acted on, and published, etc—had no binding validity, because the American Medical Association is a corporation of the State of Illinois. Its meetings for the transaction of business could only be legally held within the territorial limits of this state; therefore, the so-called constitution and by-laws, supposed to have been adopted at St. Paul, and the limitations they provide as to amendments, were not valid, because not adopted at a meeting held within the state within which the Association is incorporated; besides which, the statutes of Illinois expressly permit such amendments to be made at any annual meeting or at any adjourned session thereof.

2. As to the propriety of so small a number constituting a quorum at an adjourned session, that is a matter which the association must decide for itself. There is nothing in the by-laws to prevent any number, even to the full membership of the Association, attending the adjourned session, if they so desire; nor does it seem probable that so small a number as constitutes a quorum will be likely, at such adjourned session, to exercise bad faith toward the remainder of the Association.

3. The board decided that it was not its duty to take steps toward securing the proposed national incorporation, because:

(a) It seems very clear that congress has no power to create a national incorporation for the purposes mentioned in the charter of our Association, and to give to such Association the power to do business in any of the states or territories of the Union.

(b) While congress undoubtedly has the power to create, by special act, a corporation of this kind, and has, in fact, created somewhat similar organizations, among which is "The American Social Science Association," yet, when created, such corporations are (as is the American Social Science Association) only a corporation of the District of Columbia, and not national, and such corporation would have the same territorial limitations on it as would have charters issued by the various state governments, so that whether the Association be incorporated in the District of Columbia or in some of the other states or territories of the Union, it would be necessary to have its meetings, for the transaction of business of the corporation, held in the District of Columbia or in the state or territory in which it is incorporated. This, however, does not prevent other meetings being held for other purposes outside the state or territory creating the corporation. Precisely that condition exists to-day, so that unless it would be more convenient for you to hold your meetings for the transaction of the business of the corporation in the District of Columbia than it is to hold them in the state of Illinois, there would be nothing gained by the proposed change. In addition to this, your attention was called to the fact that as Trustees for the American Medical Association, a corporation of the state of Illinois, having large property interests here, you were, in fact, trustees for the entity—the Association—and for its various members bound to preserve its and their property in this corporation, and that you would be justly censurable if, without unanimous consent, you took measures involving the expense and uncertainty of securing the proposed corporation to take the place of the present one.

Yours truly,
JESSE A. BALDWIN.

REPORT OF THE COMMITTEE ON PROPHYLAXIS OF VENEREAL DISEASES.

Dr. Ludwig Weiss, chairman, read the report of his committee as follows:

To the President and House of Delegates of the American Medical Association: Gentlemen—The Committee on Prophylaxis of Venereal Diseases begs leave to submit the following report:

The Committee elected Dr. Henry D. Holton of Brattleboro, Vt., Chairman, and Dr. Ludwig Weiss of New York, Secretary.

Several meetings were held by correspondence; and in order to expedite matters, it was agreed on to appoint Drs. Holton, Bulkley and Weiss as a sub-committee with power to act. Dr. Frank H. Montgomery of Chicago resigned his membership on account of leaving the country, and Dr. Frank Billings, President of the American Medical Association, appointed Dr. Louis E. Schmidt, Chicago, to fill his place.

The scope of the work which the Committee has set before itself consisted at first in corresponding through its Secretary with medical men and philanthropists, with the view of gathering such information and suggestions as they may have had to offer. This step, however, did not seem productive of what the Committee considered helpful hints. It did not elicit new facts and only gave occasion to ventilate different and uncompromising views, which, while proper before an assembled body like a congress, did not open new avenues to aid the Committee in its preliminary work.

In looking for another more promising basis for its studies, the Committee has very keenly felt the utter want of statistics from boards of health, etc. There was absolutely nothing on which to build, or from which to draw conclusions. While other contagious diseases are controlled and combated by boards of health with great vigor and excellent results, venereal diseases are ignored by our sanitary authorities, and the morbidity therefrom is consequently not a matter of record; officially, there are no venereal diseases in these United States.

There remained only one other source of information, viz., the utilization of the records of the different municipal and general hospitals in the larger cities of the union. But this task would have needed a large clerical force and a substantial appropriation to cope with. It was, however, tried tentatively in many instances and proved futile.

The returns were utterly disproportionate to the number of inquiries sent out; but, had they all replied, as will be seen later, the statistics therefrom would not have proved of great value. In most general hospitals, venereal diseases are not treated; or, if so, those cases figure under different names, pertaining to the late manifestations of these diseases. This had been the experience of the Committee of Seven appointed by the Medical Society of the County of New York in 1901, for the study of measures for the prophylaxis of venereal diseases. Furthermore, the imperfect records, the various designations and omission of diagnosis and other necessary particulars for fairly definite statistics would have made it illusory to draw conclusive statistics.

These sources, while they yield interesting deductions, do not represent the amount of venereal diseases treated in the public institutions.

Your Committee then decided to enlist the help of the medical press of the country, and to this end issued a circular letter, with a request to support the movement.

Your Committee embraces this opportunity to extend publicly its thanks to the medical journals for the readiness with which the appeal was given place in their columns, either in extenso or in abstract. Without their powerful aid, surely a movement like this must fail; with their co-operation, it has a good chance to succeed.

Simultaneously with this move and in order to ascertain any laws in regard to prostitution and free treatment of venereal diseases, your Committee drafted the following questions and assigned to each member a division of the United States, so that every state and territory was covered. The following questions were asked of the different states:

1. What laws exist in the different states relating to prostitution?
2. Is there a sanitary marriage law which provides for medical examination of the contracting parties?
3. Is there any law against wilfully or knowingly communicating venereal diseases?
4. What, if any, municipal regulations exist in any city of your state regarding these diseases?
5. Is notification required of these diseases in your state?

Up to the time of completion of this report, 20 states have responded, and many more are confidently expected to do so. But even from this limited number, the utter lack of laws to combat venereal diseases can be ascertained.

The following is a summary of the returns from the states which have responded, viz.: Arizona, Connecticut, Colorado, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, North Carolina, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Utah, Virginia, West Virginia, Washington, Vermont.

Each of these states, with the exception of Rhode Island and Connecticut, has, in answer to question 1, the usual laws and sundry police regulations of general character against houses of ill fame, including specified nuisances therein against soliciting in streets, and against enticing of females under 16 years. To questions 2, 3, 4 and 5, the answer in all instances as far as relating to venereal diseases is negative.

It is gratifying to note that this circular letter elicited a number of responses from physicians, medical associations and health officers. Through the latter source, we could ascertain that, independently of the general state laws, some municipalities have their separate local laws or ordinances regarding the social evil.

The fact that states and municipalities in most instances have different laws on this question, as is the case in several states, made the task of gathering reliable facts one of great difficulty.

In order to ascertain the extent of such divergencies and also to become acquainted with the different ways municipalities settle this question, your Secretary has issued a circular letter to the health officers of the forty largest cities of the United States. The letter and questions are herewith appended:

> Dear Sir:—The undersigned, Secretary of the Committee on Prophylaxis of Venereal Diseases of the American Medical Association, takes the liberty of requesting you kindly to answer the following questions, to be used by the Committee for compiling statistics.
>
> The Committee is already in possession of data on this topic emanating from the state authorities; but, inasmuch as there seem to exist in several large cities separate laws governing these questions, independent of state laws, the Committee would be greatly indebted to you, if you would kindly furnish it the data embodied in its questions.

As the Committee has to report at the next—New Orleans—session of the American Medical Association, May 5-8, a prompt answer would greatly oblige.

Very truly yours, L. Weiss, Secretary.

1. Is there any law or ordinance in your city relating to prostitution? If so, what are its provisions?

2. Is there any law for wilfully or knowingly communicating venereal diseases?

3. What, if any, municipal regulations exist in your city regarding these diseases?

4. What are the accommodations and the number of beds for venereal patients in the hospitals under the jurisdiction of the health board of your city?

At this writing, the following twenty cities have been heard from: Albany, Baltimore, Buffalo, Cleveland, Detroit, District of Columbia, Louisville, Lowell, Minneapolis, Newark, New Orleans, New York, Philadelphia, Pittsburg, Providence, Rochester, St. Paul, Syracuse, St. Louis, Scranton, Worcester.

The summary of these answers elicited the fact that as to question 1, there are in existence the police regulations of the general character, confessedly a dead letter; Detroit and Cincinnati have a regulation on the continental plan. Questions 2 and 3 are in each instance answered in the negative, and as to question 4, there is the usual scarcity of beds for venereal patients, in some cases absolutely out of all proportion to the number of inhabitants.

That the interest towards the recognition of venereal diseases is increasing and that the profession is conscious of the great social danger from it, is shown by the activity of different medical societies in this direction. Among others may be mentioned the State Medical Association of Maine, which had a committee appointed to study the expediency of adding syphilis and venereal diseases to those required to be reported to the boards of health. It will instruct its delegate to vote in favor of a congress. The Missouri Valley Medical Association passed a resolution unanimously endorsing this progressive movement of the American Medical Association, appointing a committee of three to aid this Committee in every way, if so desired. Your Secretary has extended thanks for the offer.

A similar movement was contemplated by the state and provincial boards of health of Vermont. The secretary of the State Board of Health of Iowa expressed his hearty sympathy with the Committee's efforts looking towards the prophylaxis of venereal diseases.

The Board of Health of the City of New York expressed its interest in the matter and hopes that the department can take some action regarding it. The chancellor of the University of Nebraska expressed his sympathy with the movement tending to combat the spread of venereal diseases and most of the city officials to whom the above questions were sent expressed their sympathy with the movement and promised to take steps for municipal control of venereal diseases.

After having passed in brief review the steps taken by your Committee, we may be permitted to deduce from our preliminary study such facts as may perhaps prove of some value or importance in the further consideration of this question. The Committee does not commit itself to anything except the opinion that it regards the prophylaxis of venereal diseases as of sufficient moment to receive deliberate and careful consideration by this honorable House of Delegates.

The dire consequences of venereal diseases do not only affect the working and earning capacity of the people, but also their well being. The well being of the people is encroached on not so much by the active incidents of these diseases, but much more through their chronic manifestations, especially in women. The tedious and invalidating course of chronic pelvic inflammations, their painful and ever-recurring accidents diminish the exercise of motherly care of the children, forces to relative or absolute inactivity the helpful mate. The working capacity being thus diminished, of course, the earning capacity suffers also, and the type of an ill-nourished, careworn and poverty-stricken family is established. And as poverty and squalor are the stranglers of morals, virtue in the children takes its leave, the demon alcohol takes possession of the despairing husband and father, and mute resignation and despair dulls the sensibilities of the wife and mother.

It has been approximately determined that among the communicable diseases in Prussia, typhoid represents a yearly money loss of 8,000,000 marks, while the increased expenses and decreased income caused by venereal diseases amounts to 90,000,000 marks yearly, an amount which supersedes that caused by consumption. But the financial loss is of minor importance compared with the enormous social danger and consequent social misery. Gonorrhea, especially its latent form, destroys the procreative functions in both sexes; in men through chronic inflammation of the adnexa, causing a zoospermia and necrospermia (and further stricture and ascending inflammation of the kidneys). In women through most serious involvement of the pelvic generative organs and their adnexa, destroying fecundity and giving rise to mutilating surgical operations. Eighty per cent. of all deaths from pelvic diseases in women are due to gonorrhea. Twenty per cent. of all blindness is due to gonorrheal infection of the newborn. Fifty per cent. of all involuntary childless marriages are caused by gonorrhea of the female organs of generation, of which 45 per cent. are due to marital infection by men. Taking this view of the existing conditions, the mooted question of "race suicide" so eminently emphasized of late as a voluntary cause of barren marriages, finds its explanation in a quite unexpected but entirely natural, if even in a not quite as voluntary a way as was generally presumed.

The original source of this gonorrheal infection is traceable in about 70 per cent. to prostitutes, and as 80 per cent. of all men had had gonorrhea once or several times, the conclusions reached are obvious.

While almost every prostitute must be looked on as infected with gonorrhea, compilations have shown that about every fourth disseminates syphilis. This means that syphilis is about four times rarer than gonorrhea. But, notwithstanding, it stands higher in its fatality. With lessened morbidity it unites a more profound activity in the visceral organs; it is always a constitutional infection with a high mortality and transmissible through heredity. In contradistinction to gonorrhea, it can be acquired also in a non-venereal way. In countries of inferior culture, it is disseminated in nine-tenths of all cases in an extragenital way. Syphilis insontium is acquired in about 5 per cent. of all cases. It causes abortion in from 60 to 80 per cent., and propagates this tendency up to the third generation. Marital infection takes place in about 5 per cent. of syphilitic women and from 60 to 80 per cent. of this is due to prostitution.

There are, according to some authorities, 150,000 syphilitics in Berlin, or 12 per cent. of the inhabitants; in Paris, from 13 to 18 per cent. In Copenhagen, 1 of every 55 young men of the age between 20 and 30 has syphilis and 1 in 8 has gonorrhea. In the City of New York the number is estimated to reach 200,000. The same ratio holds good with very little oscillations in every capital or large city.

An approximate idea of the prevalence of venereal diseases can be gotten from the records of the various armies. There, from a body of men living under almost similar social conditions and with every case duly reported, the morbidity from venereal diseases can easily be ascertained. Although very valuable, these statistics, however, do not elucidate conditions in the great mass of the population.

As to the armies, these are the figures per thousand:

Germany	27	Austria	65
Russia	43	Italy	71
France	44	Great Britain	204

(Parliamentary Report, July 15, 1897, made by the Earl of Dunraven.)

The admission rate for the whole army of the United States for 1901 was 133.97 per 1,000. In the Philippines, those diseases have increased materially in their prevalence. In 1901 they constituted 20.42 per cent. of the total sickness, as compared with 8.97 in 1900. In consequence of this dire condition, medical inspection of the troops at regular intervals and reglementation of the prostitutes has been instituted there. The navy of the United States, i. e., the force afloat, participated with 112 per thousand, against 119.7 of the German navy.

A much more reliable statistic, because embracing the whole population, can be gathered from Sweden and Denmark, where, since 1874, venereal diseases are among the reportable contagious diseases. Physicians there are held to make weekly returns. Every venereal patient is obliged to have himself treated and treatment is given gratuitously. Statistics there show that since 1887 the number of venereal diseases has diminished 34 per cent. In the Dukedom of Braunschweig, where every hospital is open for those afflicted with venereal diseases, constitutional syphilis has greatly diminished in proportion to other venereal diseases.

The latest and most original departure to ascertain the prevalence of venereal diseases was instituted by Prussia. By request of the Government, all venereal diseases coming into treatment on the 30th day of April, 1900, had to be collected by physicians and their reports returned for statistical purposes. It appears, then, that on this day there were in the Kingdom of Prussia 40,920 venereal patients under treatment. (Seventy-five per cent. males and returns and in consequence of other errors the real number of 25 per cent. females.) Among which were 11,000 cases of recent syphilis. But since, only 63 per cent. of all physicians made venereal patients on this day would amount to 64,000, making a yearly aggregate of 773,000 and possibly more venereal patients. This means that in Prussia three-quarters of a million people are afflicted yearly from venereal diseases; or that, out of 22 adults, 1 becomes infected every year. By computation, it has further developed that in Berlin, among men who marry after their 30th year, every one had gonorrhea twice and every fifth was infected with syphilis. These are appalling numbers and far outdistance even consumption.

Finally, we will scan cursorily the hospital facilities of different countries for the treatment of venereal diseases.

In Prussia, every 29th venereal patient is admitted to the hospital. The other 28 must either content themselves with dispensary treatment or fall into the hands of quacks. In all Germany only 7 per cent. of venereal diseases are admitted to the hospitals.

The main cause of this dereliction lies everywhere in the insufficient supply of hospital facilities and that most general hospitals do not admit venereal patients, or only occasionally so; and in the contemptuous and unkind treatment of patients so afflicted. The poorest accommodations, the meanest food are given them and no wonder that they try to avoid the hospital terror.

We must, in order to combat venereal diseases, first sterilize its sources, and this can only be done by early and judicious treatment of the afflicted.

London has one general hospital bed for each 1,000 of its population. New York, one bed for each 5,000. London treats 88 per cent., New York only 9½ per cent. of its infectious diseases in hospitals. In order to effectually cope with venereal diseases, London ought to have for its 6,300,000 inhabitants about 2,500 beds for venereal patients, and Greater New York, with its 3,500,000 inhabitants, at least 1,800 beds at its disposition.

In the northern countries of Europe where venereal diseases are classed among the reportable ones, and gratuitous treatment and generous hospital facilities are within reach of every one, venereal diseases have greatly diminished.

Stockholm is in the enviable position of having more beds than needed (366), and complains only of the lack of polyclinics for outdoor patients. In Hungary, the treatment of sick prostitutes as outpatients is strictly forbidden and hospital treatment required; transmission of venereal diseases is made punishable. Punitive legislation against wittingly communicating venereal diseases is in existence in Norway, Denmark and Finland. The countries of middle Europe have no such laws yet.

The foregoing fragmentary statistics will convincingly prove that venereal diseases stand next to tuberculosis and alcoholism, if not superseding them. They are permeating the very root of the population, as 15 to 20 per cent. of adult males are infected with syphilis, and about 80 per cent. of them had gonorrhea, tainting those yet unborn, maiming those born with the virus already in their blood, deteriorating the race, devitalizing the individual.

The dangers from venereal diseases to the people, their socio-economic importance, their causing premature invalidism are of sufficient moment for all governments to exert their utmost to cope with them.

Gentlemen of the House of Delegates: It is a grave responsibility which rests on the shoulders of the medical fraternity. It is a complex and intricate question, consisting of ethico-moral and sanitary-medical components, which forces itself inevitably and in an ever recurring way to the attention of the medical profession. To shirk it, we must not. To evade it, we dare not. To pass it over in silence, we can not!

We are brought face to face daily with the primary and late manifestations of venereal diseases, their devastating influence on the affected, on the family and on the well being of the people in general.

In combating them, we must not fail to take into consideration both components of the question, although in our dealings the sanitary side will be of paramount interest. We can do an enormous amount of good by inculcating in the young sexual purity, respect for women and the possibility of continence. On the other hand, we must insist, in order to combat the spread of the disease and to sterilize its sources, that larger hospital and dispensary facilities should be made available. There has been a most effectual crusade instituted against tuberculosis everywhere. Through a high tax license the barriers against alcoholism are raised. Only against the third curse of humanity—venereal diseases—there is a lack of action, a sin of omission, almost as bad as the sin of commission of sexual profligacy. The legislator does not legislate, the registrator (of the boards of health) does not register it, the hospital does not house it! As Bulkley puts it—ignored through ignorance, neglected through negligence of our duty! So, ostracized and outclassed, venereal diseases, through ignorance, false shame, concealment, prejudice, carry on their slaughter unhampered, unchecked and undisturbed, devastating coming generations, ruining the present one.

Your Committee would most strenuously emphasize the fact that, in its labors, it has not taken any stand, neither *pro* or *con* regarding the licensing or suppression of the social evil. True to the wording of the resolution, it has confined its studies only to the question whether the enormous spread of venereal diseases could be inhibited by a systematized action emanating from the profession. It has come to the conclusion that, looking at it from whatever point of view, it is the medical profession which will have the decisive word in the premises. It is convinced that the profession, to which the first and ultimate appeal for help is made by the afflicted, is, in consequence of its intimate relation to the physical ailments of humanity, well able to cope with both components of the question. The unselfish perception of its duties will and always did prompt the medical profession to exert an educational as well as sanitary influence towards the diseased in body and towards those morally dejected.

Your Committee, therefore, is impressed that, inasmuch as only a concerted action is promising of results, it is incumbent on the medical profession to discuss and recommend means and ways against the great and growing danger of the most serious and lasting of all contagious diseases that afflict humanity. It most respectfully recommends to the honorable House of Delegates that a national congress for the prophylaxis of venereal diseases should be convened under the auspices of the American Medical Association. This will mark an epochal event in the history of this great national body of medical men, to have contributed their mite towards the welfare of the people, by endeavoring to check the spread of some of the most persistent and virulent poisons conveyed into the blood of the people. Your Committee respectfully submit, in a preliminary way, the following points which would serve as a basis for such a congress.

First.—As the states can not with impunity ignore the existence of venereal diseases, and as it is the duty of the state to protect the people from the ravages of contagious diseases, there should be instituted through the state and district societies a propaganda of action in each state or district society looking towards a proper recognition of venereal diseases by the different legislatures.

Second.—That the American Medical Association authorizes its accredited delegates from each state, or by appointing special committees for this purpose, to organize such a movement in their respective state and district societies and to send delegates to such a congress.

Third.—That such delegates may then, fortified by the authority of the American Medical Association, in such a congress convened, bring to bear on their home legislature the necessity of legislation against the spread of venereal diseases.

Fourth.—To appoint a central committee of organization to be in touch with the various state committees.

The congress would discuss and act on the following questions:

SOCIAL MEASURES.

Prostitution.—Its causes and how to diminish its extent. (*a*) Safeguarding minors. (*b*) By raising the age of consent. (*c*) Socio-economic measures. (*d*) Educational measures. (*e*) Creation of a provident education law.

SANITARY MEASURES.

Prophylaxis by Treatment.—(*a*) Making venereal diseases reportable without giving names and addresses, solely for statistics of morbidity. (*b*) Liberal and enlarged hospital and dispensary facilities, with gratuitous treatment.

LEGISLATION.

(*a*) State laws against diffusing syphilis and venereal diseases in an extragenital way. (*b*) Certifying the health of wet nurses. (*c*) Regulating the profession of ritual circumcisors, of barbers, of dentists. (*d*) Trade sanitary laws against transmission of syphilis (glassblowers, cigarmakers, manicurists, etc.).

INDIVIDUAL PROPHYLAXIS.

(*a*) By teaching the avoidance of dangerous contact. (*b*) By instructing the diseased how to avoid infecting others.

MISCELLANEOUS MATTERS.

(*a*) Recommending a uniform nomenclature. (*b*) Broader education of medical students in venerology. (*c*) National and international statistics. (*d*) To petition the Congress of the United States for the creation of a Cabinet position to be called Department of Health. (*e*) Creation of societies to wage battle against the spread of venereal diseases like the Société Internationale de Prophylaxie Sanitaire et Morale, in Brussels, in connection with the international conference held there. And the German society of Berlin for combating venereal diseases; with periodicals issued by such societies.

The name of the congress to be National Congress for the Prophylaxis of Venereal Diseases, under the auspices of the American Medical Association. Respectfully submitted,

Henry D. Holton, Ludwig Weiss, George M. Kober, W. H. Sanders,
L. Duncan Bulkley, Louis E. Schmidt, Committee.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Asthma.

The following combination appears in the "Indian Med. Record," and is recommended in the treatment of bronchial asthma:

℞.	Pot. iodidi	gr. x		65
	Spts. ammon. arom.	m. xx	1	30
	Spts. etheris sulph.	m. xx	1	30
	Tinct. belladonnæ	m. x		65
	Aquæ camphoræ	℥i	30	

M. Sig.: To be taken at one dose.

The author places emphasis on the good effects of the potassium iodid, especially in those cases accompanied by a bronchitis. The dose of this preparation may be repeated three or four times a day, and gradually increased to thirty (2.00) or forty (2 65) grains at a dose.

He recommends it given in a glass of milk, without any admixture of syrup and on an empty stomach. When combined with potassium carbonate the iodin is not set free in the stomach, and consequently prevents disturbance of that organ. It may be combined with ammonium preparations which act on the skin and so relieve the mucous membranes.

Poulet, in "Bul. Gen. de Ther.," recommends the following combination containing oxalic acid in the treatment of asthma and capillary bronchitis:

℞.	Acidi oxalici	gr. xxx	2	
	Sodii bicarb.	gr. xlviii	3	20
	Syr. aurantii	℥ii	60	

M. Sig.: One tablespoonful every hour.

In ordinary forms of bronchitis, "Press Medical" recommends the following:

℞.	Thiocol	gr. xxx	2	
	Sodii benzoatis	gr. xxx	2	
	Tinct. aconiti	m. xx	1	30
	Aq. laurocerasi	ʒiiss	10	
	Syr. senegæ q. s. ad	℥v	150	

M. Sig.: One tablespoonful three times a day.

Robin recommends the following in chronic bronchitis:

℞.	Antimonii oxidi (white)	gr. viii		50
	Syr. ipecac.	ʒii	8	
	Terpin hydratis	gr. iii		20
	Dionin	gr. 1/6		01
	Mist. acaciæ	℥iv	120	

M. Sig.: One tablespoonful several times a day.

Iodin Solution for Furuncles.

According to an abstract in the "Med. Standard"' Gallois and Courcoux recommend the employment of a concentrated solution of iodin in acetone in the treatment of boils, as acetone will hold in solution four times as much iodin as alcohol. The following formula is advised:

℞.	Iodi (metallic)	ʒi	4
	Acetone	ʒiiss	10

M. Sig.: Apply locally to the inflamed part.

This preparation produces only slight pricking sensation to the unbroken skin, but sharp pain is experienced if applied after the boil is opened. It is claimed that a boil, by this means, may be arrested before it reaches the suppurative stage.

Effects of Tight Diapers.

Dr. Alfred C. Cotton, in an article in "Arch. of Ped.," condemns the effects of tight diapers as being the cause of deformity by compression on the tissues which are still in the formulative period. Skiagraphs are given, showing the results of pinning diapers of firm, unyielding substance tightly around the the pelvis, thus producing a retardation of its growth. The thorax, according to the author, may likewise be constricted. Genu valgum may be produced by wadding a lot of diaper material between the thighs. The material should be light, made of absorbent cotton, covered with cheese cloth. The clothing should be supported from the shoulders. Knitted, seamless underclothing may be worn.

Pertussis.

The following combination is recommended by the "Month Cyc. of Med." as a local application in the treatment of pertussis:

℞.	Acidi carbol. crys.	gr. xv	1
	Sol. cocainæ hydrochlor. (2 p. c.)	m. lxxx	5
	Glycerini	ʒiv	15

M. Sig.: To be brushed over the pharynx before or between the paroxysms.

Yeo recommends the following combination as a favorable mixture in lessening the severity of the paroxysm and rendering the mucous less tenacious:

℞.	Sodii benzoatis	gr. lxxii	5	
	Sodii bicarb.	gr. xlviii	3	20
	Ammonii chloridi	gr. xxiv	1	65
	Aquæ chloroformi	℥i	30	
	Aquæ anisi q. s. ad	℥iii	90	

M. Ft. mistura. Sig.: One to four teaspoonfuls, according to the age of the child, in a little hot milk, every four hours.

Syphilis.

The treatment of syphilis, according to W. D. Trentwith, in "Med. News," should be divided into four stages, as follows:

1. The pre-eruptive period.
2. The eruptive stage, including the first six or seven months.
3. From the sixth or seventh month to the end of the second or third year.
4. The tertiary stage.

In the pre-eruptive stage attention should be given to the general condition of the patient. Smoking or chewing tobacco and the use of alcoholics should be stopped and the patient given plenty of fresh air and a nutritious diet. If the chancre does not properly heal it should be washed with castile soap twice a day, followed by a 1 to 2,000 bichlorid solution and that followed by an application of lint saturated with the same solution or a 50 per cent. solution of lotio nigra. If an indurated nodule remains after the sore has healed, the author recommends the application of a 50 per cent. mercurial ointment. In the same way an application can be made to the inguinal glands as soon as any enlargement is made out, applying about gr. 15 (1.00) of the ointment and rubbing it in well each night. The mouth and teeth should be carefully looked after in order to prevent lesions in the oral cavity if possible. As an antiseptic tooth powder he recommends the following:

℞.	Potass. chloratis	℥ss	15	
	Pulv. saponis	℥iss	45	
	Olei gaultheriæ	m. iii		20

M. Sig.: As a tooth powder; or:

℞.	Potassii chloratis	ʒi	4
	Aquæ	℥viii	240

M. Sig.: As a mouth wash, to be used several times through the day.

In the eruptive stage the treatment should be promptly carried out. It is on the new, young cells, according to the writer, that mercury is most destructive, so that loss of time in its administration diminishes to that extent the patient's chance for recovery. He sometimes begins with the protoiodid of mercury in doses of gr. 1/8 (.008) to gr. 1/4 (.0015) three times a day. This may be continued two or three weeks. He prefers, however, inunctions rubbed thoroughly into various portions of the body, naming the ten or eleven selected areas, not omitting the spaces between the fingers and the toes, the palms of the hands and the soles of the feet. A 50 per cent. mercurial ointment is used so divided that thirty or forty grains may be used at each inunction. The patient is instructed to take a warm bath daily or to cleanse the region to which the ointment is to be applied and then thoroughly rub it in; from fifteen to thirty minutes being required before all the ointment disappears.

Each part of the body should serve its term until the body is entirely covered; at the same time the indications of too large doses should be watched for, such as salivation, anemia, loss of weight, etc., when the ointment should be omitted for a few days and again resumed in smaller doses. Elimination by the bowels must be carefully inquired into.

If no untoward symptoms arise the daily amount of the ointment may be raised to gr. 45 (3.00) and finally to gr. 60 (4.00). The inunctions are stopped, and after one or two days potassium iodid begun, commencing with ten drops (.65) of a saturated solution, well diluted and gradually increasing it to twenty (1.20) or twenty-five drops (1.65) three times a day. This should be continued for 15 or 16 days, when the inunctions are repeated for 10 to 11 days, followed by the potassium iodid for 15 or 16 days. This plan should be carried out until the sixth or seventh month, in which time the entire body will have been covered from seven to twelve times. The author then advises a rest of three or four weeks, when he places the patient on the following mixed treatment:

℞.	Hydrarg. biniodidi	gr. 1/30-1/24		002-.0025
	Potassii iodidi	gr. v-xv		30-1.00
	Aq. destil. q. s. ad	ʒi	4	

M. Sig.: At one dose, to be repeated three times a day in plenty of water. The foregoing mixed treatment is prescribed, with intermissions, occasionally, of three to four weeks, until twelve or thirteen months have passed, after which time potassium iodid is given, in doses reaching gr. 50 (3.30) to gr. 60 (4.00) three times a day, about two months out of every four, and changing to the mixed treatment at times. This treatment is continued to the second year, when no bad signs being present the treatment may be stopped and the patient kept under proper observation.

For the treatment of mucous patches the author recommends an application of a 5 per cent. solution of silver nitrate every other day and the use of a gargle as follows:

℞.	Hydrarg. bichloridi	gr. iii		20
	Tinct. myrrhæ	ʒss	2	
	Aquæ destil. q. s. ad	℥viii	240	

M. Sig.: As a gargle; or:

℞.	Alumeni	ʒi	4
	Potass. chloratis	ʒiss	6
	Aq. destil.	℥viii	240

M. Sig.: To be used as a gargle.

The treatment of salivation should consist in stopping the inunctions, moving the bowels with salts (either Rochelle or Epsom). In cases where syphylides or gummata reappear large doses of potassium iodid are given internally and inunctions applied or calomel fumigations may be employed or a local application applied as follows:

℞.	Hydrarg. bichloridi	gr. i		06
	Collodii	℥i	30	

M. Sig.: Paint over the affected area and renew from time to time.

As a fumigation the following:

℞.	Hydrarg. chloridi mitis	gr. xx	1	30
	Cinnabar	gr. xl	2	65

M. Sig.: As a fumigation.

Fumigation and the hypodermic method are both of value when other methods fail.

Tabes Dorsalis.

Dr. C. Pope, in the "Alienist and Neurologist," states that he has never seen any benefits derived from mercury in either large or small doses, nor from a course at Hot Springs, but on the other hand untoward results have been observed. The only preparation from which he has obtained the expected results is silver nitrate in doses of grain 1/6 (.01) to 1/4 (.015) given three times a day, one or two hours after each meal. The crisis is best treated by morphin, used with great caution. Strychnin should be rarely used, and when given it should be administered in very small doses.

Peritonsillar Abscess.

The following is recommended by the "Phil. Med. Jour." in the treatment of quinsy:

℞.	Ichthyol	ʒiii	12	
	Ung. belladonnæ	ʒii	8	
	Olei citronellæ	m. iii		20
	Adipis lanæ hydros.	ʒiii	12	

M. Sig.: To be applied externally.

Medicolegal.

Power of Board to Revoke License for Immoral Conduct.—Chapter 254 of the Laws of Kansas of 1901 provides, among other things, that the state board of medical registration and examination may refuse to grant a certificate to any person guilty of felony or gross immorality, and may, after notice and hearing, revoke the certificate for like cause. The Supreme Court of Kansas says, in the case of William M. Meffert vs. the State Board of Medical Registration and Examination, that a surfeit of authority might be cited holding that the state, in the exercise of its police power, may prescribe the qualifications which a physician must possess before entering on the practice of medicine or surgery. The State Board of Medical Registration and Examination is not a judicial tribunal; while it may be said to act *quasi* (as if) judicially it is only a ministerial board and performs no judicial functions. It is classed with such boards as the county boards of equalization, boards for the examination of applicants for teachers' certificates, city councils in granting and refusing a business or occupation license, and numerous other boards of similar character. Such boards perform no judicial functions, are not judicial tribunals, and have never been classed as such. It was contended that the procedure before the board in the admission and rejection of evidence was violative of the rights of Meffert, in that the evidence received and acted on was made up largely of unsupported accusations, hearsay and street rumor, and was not sufficient to sustain the findings. The provisions of the act creating the board, the court goes on to say, plainly indicate that such investigation was not intended to be carried on in observance of the technical rules adopted by courts of law. The act provides that the board shall be composed of seven physicians. These men are not learned in the science of law, and to require of a board thus composed that its investigations should be conducted in conformity to the technical rules of a common law court would at once disqualify it from making any investigation. It is subversive of the morals of the people and degrading to the medical profession for the state to clothe a grossly immoral man with authority to enter the homes of her citizens in the capacity of a physician. It was the intention of the legislature to adopt a summary proceeding by which the morals of the people and dignity of the profession might be protected against such a possibility without being embarrassed by the technical rules of proceedings at law. Meffert was timely notified of the charges preferred against him and the time when a hearing would be had and was given ample opportunity to refute such charges. The findings by the board are conclusive on this court. Next, it was contended that the immoral conduct with which this party was charged was not practiced in the line of his profession, therefore not cognizable by the board, and the court says that it only mentions this contention to condemn it. The law is not that the board must find that such person has been grossly immoral with his patients, but that he is grossly immoral in his general habits. The object sought is the protection of the home of the sick and distressed from the intrusion therein, in a professional character, of vicious and unprincipled men—men wholly destitute of all moral sensibilities. It was not the purpose of the lawmakers to clothe a man with a certificate of moral character and send him out to prey on the weak and unsuspecting, on those who would be entirely at his mercy, and quietly await the accomplishment of that which observation and experience has taught us is certain to follow before depriving such person of the endorsement which gave the opportunity to commit such wrong. The law disqualifies one guilty of a felony. It would hardly be contended that the felony for which a license may be revoked must have been committed on a patient or against the property of a patient, or while such physician was attending a patient. Nor does the court agree with the contention that to deprive a physician of his right to practice medicine otherwise than by a judgment or forfeiture by a judicial tribunal violates the fourteenth amendment to the constitution of the United States, which forbids any state to deprive any person of property without due process of law. It says that we have seen that it is within the police power of a state to prescribe the qualifications of one desiring to practice medicine, and also to provide for the creation of a board or tribunal to make the examination and determine whether the applicant for a license to follow this profession possesses the required qualification, and, if so, to issue to him such license. It must follow that the state may confer on the same board or tribunal the power to revoke such license, if it should thereafter be made to appear that the license should not have been issued, or if for any reason the holder thereof since its issuance had become disqualified. This constitutional provision is not a restriction or limitation on the police power of the state to pass and enforce such laws as in its judgment will inure to the health, morals or general welfare of its people. Such power is reserved to the state, and has been so recognized by all courts since the adoption of this amendment. Another contention was that the state board of medical examiners had no power to revoke the license theretofore issued, because the acts for which the commission was revoked, if committed at all, were committed before the passage of the law creating the board and, therefore, as to such acts the law was *ex post facto*. But the court says that an *ex post facto* law is meant one which imposes a punishment for an act that was not punishable at the time it was committed or imposes an additional punishment to that then prescribed, etc. The revocation of a license to practice medicine for any of the reasons mentioned in the statute was not intended to be, nor does it operate as a punishment, but as a protection to the citizens of the state; such requirements go to his qualifications, and where the qualification imposed is reasonable, one has no right to complain that he is deprived of the right to practice his profession because he has not conformed to such reasonable regulations. If the revocation was intended as a punishment, there might be force in this argument, but, since the only purpose of the law was to require a certain standard of morals of the physician, the argument is without force.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Philadelphia Medical Journal.

April 25.

1 Problems in Sanitation. Henry D. Holton.
2 *The Association of Tabes and Multiple Sclerosis: Report of a Classical Case of Tabes with Intention Tremor and Nystagmus. Charles J. Aldrich.
3 *The Curative Powers of the X-Rays upon Lupus and Malignant Growths, with Reports of Cases. Thomas J. Buchanan.
4 *Splenic Anemia, Note of a Case. A. L. Benedict.
5 Report of a Case of Cranial Fistula Cured by Operation. J. A. Keown and E. B. Schallenbach.

2. **Tabes and Multiple Sclerosis.**—The case reported by Aldrich gives a perfect type of intention tremor with nystagmus in a classical tabetic, yet, in view of the man's age and the fact that we may have nystagmus in locomotor ataxia as well as motor irritations and intention tremor, he sees no necessity of complicating our pathology by assuming simultaneous existence of the two diseases.

3. **The X-Rays.**—Buchanan reports and illustrates a case of epithelioma and lupus treated by the *x*-rays. He holds that they act in carcinoma largely through disturbance of the trophic nerves supplying the blood vessels and skin and interfering with the blood supply of the neoplasm with subsequent atrophy. His conclusions are given as follows:

1. Superficial epitheliomata, lupus, rodent ulcers, eczema and many kindred skin affections can positively, in many cases, be cured with the *x*-rays.

2. The growth of deep-seated carcinomata can sometimes be retarded, and the pain very much lessened by means of the *x*-rays, but that such patients can be permanently cured is, as yet, not demonstrated.

3. A tube of medium-high vacuum is better suited for *x*-ray therapy than a tube of low power, particularly for deep-seated carcinomata.

4. The part exposed should never be nearer the tube than 12 inches.

5. An exposure should never last longer than 5 or 10 minutes at one sitting.

6. An interval of three or four days should intervene between each sitting.

7. In order to produce a cure it is neither necessary to produce a burn nor to cause any reaction whatever.

8. All cases of inoperable carcinomata, sarcomata, etc., should be treated with the *x*-rays before they are abandoned as hopeless.

9. The operator must be one well skilled in the use of the *x*-ray apparatus.

10. After the suspension of treatment, carcinomata show a strong disposition to return quickly.

4. **Splenic Anemia.**—After reporting a case, Benedict suggests the probability of the occasional relations of hepatic sclerosis to splenic anemia.

Medical News, New York.

April 25.

6 *The Treatment of Syphilis. W. D. Trenwith.
7 *The Treatment of Acute Gout. J. R. Clemens.
8 *Chronic Parenchymatous Pulmonary Tuberculosis. Wm. N. Beggs.
9 *Spinal Cord Injury, So-called Concussion of the Cord. Frank Parsons Norbury.
10 Report of a Case of Monocular Inferior Hemianopsia. E. S. Saylor.
11 Hydragogin—Some Observations upon Its Use in Diseases of the Heart and Kidneys. M. Loewenthal.
12 The Use of Normal Salt Solution. Harry F. Thompson.

6.—This article is noticed in the Therapeutic Department.

7.—Ibid.

8. **Tuberculosis.**—The form here described by Beggs under the title of chronic parenchymatous pulmonary tuberculosis, consists in a general inflammation of the lung substance. The designation he considers is not satisfactory. We might call it pan-pulmonary tuberculosis, but there are objections. In all forms the parenchyma is involved and in the present form all the pulmonary structures are equally affected. He thinks the type is worthy of attention and recognition for the following reasons:

1. It is a perfectly characteristic type of pulmonary tuberculosis, distinctly different from those generally recognized. 2. It is constant in its progress and bad in its prognosis. It is scarcely less fatal than phthisis florida though its duration is longer. 3. It is very insidious, and this tends to cause error on the part of the physician and a mistaken sense of security to both patient and medical adviser. 4. The preceding two reasons render its early recognition of great importance to both physician and patient.

9. **Spinal Concussion.**—Norbury reviews the conditions and concludes that the underlying lesion, as far as the cord is concerned, is a disturbance of the circulation and injury to the blood vessels. Intramedullary hemorrhage, he thinks, is the result. It is impossible to eliminate the psychic element altogether, but pathologically, while more or less speculative, there is a leaning toward the injury theory.

American Medicine, Philadelphia.

April 25.

13 On Volumetric Testing for Sugar. John Marshall and Leon A. Ryan.
14 *A Contribution to the Study of Manubrial Dulness, Especially as Related to Enlarged Bronchial Glands. H. B. Whitney.
15 *A Study of Weights in Pulmonary Tuberculosis. Lawrason Brown.
16 Wounds of the Thorax. Isaac R. Trimble.
17 Transient Unilateral Ophthalmoplegia Exterior of Peripherical Origin with Atrophy of the Optic Nerve. Charles J. Kipp.
18 *Glycosuria Gravidarum. William Ruoff.
19 The Bureau of Government Laboratories for the Philippine Islands: Scientific Positions Under It, Etc. Richard P. Strong.

14. **Manubrial Dulness.**—Whitney reports cases with illustrations showing the areas of manubrial dulness in connection with enlargement of the bronchial glands. In all the cases the chief enlargement was toward the left side, contrary to the dulness of aneurism, which is generally on the right. Pressure symptoms may be very pronounced and the value of this little point is considerable.

15. **Tuberculosis.**—Brown has studies the weight variations in tuberculosis and concludes that the decrease is due to toxic absorption. It is not the amount eaten but the amount assimilated that is of value to the consumptive. Carefully regulated rest and exercise are of most importance as regards the bodily weight in pulmonary tuberculosis. Forced exercise should be avoided; change of residence or climate may aid in assimilation. An excessive gain in weight may be a bad sign. The gain in weight is usually first evident on the chest, next on the abdomen in men and the hips in women. A constant rapid loss of weight indicates as much as any other phenomena that the patient is losing ground, while the gain of a few pounds is of little value in the prognosis, but if the gain is continuous over a period of two or three months, the patient is probably improving. A gain of weight is no sure sign of betterment, but on the whole the patients who gain over twenty pounds do better than those who do not. Sunshine and dryness are not necessary factors to gain in weight; cold weather stimulates assimilation and gain in weight more than warm weather.

18. **Glycosuria Gravidarum.**—This condition is studied by Ruoff, who reviews the cases he has collected from the literature and reports his personal observations. He sees no special difference between glycosuria in the pregnant woman and that in other conditions. It may develop during pregnancy or pregnancy may occur after the establishment of the disease, and in the latter event its malignant character is soon established. The infants usually die early. The conclusions are given as follows:

Glycosuria gravidarum may arise at any stage of pregnancy. It is not so serious as when diabetes antedates pregnancy.

It may disappear in one pregnancy and reappear in another, and end fatally after successive attacks. It frequently arises during parturition, but is of no great importance.

Labor is not materially affected, other conditions being equal.

Pregnancy is most likely to be interrupted.

Is very destructive to the fetus. More so than syphilis.

Maternal mortality is nearly 50 per cent.

Diabetics should not marry.

Death is usually by coma, no case of eclampsia having ever occurred in a diabetic.

Medical Record, New York.

April 25.

20 *Observations on Some Limitations of Diagnosis. Edward G. Janeway.
21 *The Toxicity of Appendicitis, with a Report of Two Cases of "Appendicular Vomito Negro." George R. Fowler.
22 *Cardioptosis and Its Association with Floating Liver. Max Einhorn.
23 *The Pathogenesis of Diabetes. Henry S. Stark.
24 A Case of Acute Dilatation of the Right Side of the Heart. P. P. M. Jorgensen.
25 Tumor Complicating Labor. George W. Squires.

20. **Limitations of Diagnosis.**—Janeway calls attention to the possibility of errors in diagnosis, and especially to the importance of study of the history and antecedents. This is practically illustrated in contagious diseases. He mentions variola, a type resembling varicella and the confusion that has taken place, and also purpuric forms. He gives instances of the difficulties of investigation of typhus and typhoid, and the importance of the diagnosis of gastric ulcers and growths, the confusion between general syphilis and tuberculosis in certain cases, between the various forms of heart disease, etc., all illustrating the limitations of diagnosis and the necessity of a careful study of the histories and antecedents.

21. **Appendicitis.**—The toxicity or toxic effects of appendicitis on the organism are especially noted by Fowler, who particularly calls attention to the complication of vomiting of blood which Kirmisson seems to have been the first to observe. It has also been noticed by Nitzsche, Dieulafoy, and the author, who reports two cases of his own observation. He thinks the occurrence of hematemesis adds another to the already long list of the grave complications of appendicitis. In one of his own cases emboli of the gastric mucosa were found, which fact did not agree with Nitzsche's findings.

22. **Cardioptosis.**—Einhorn first reviews the literature of cardioptosis and then describes the symptoms, reporting cases. He finds that emaciation, enteroptosis and neurasthenia all seem to play an important part in its etiology, but are not alone sufficient to cause it. It is less likely to occur in women, which fact he attributes to their habit of wearing corsets, which serve as a preventive. The chief symptoms are palpitation, brachycardia, tachycardia, etc., and occasional in-

ability to lie on the left side, none of which are absolutely characteristic of this condition. In nearly one-half the cases general enteroptosis is found. It does not endanger life and its subjective symptoms may be alleviated or removed. The main hopes of treatment are improvement of nutrition and strengthening of the nervous system. He also advises avoidance of the stooping position, and sleeping with the head and thorax as nearly horizontal as possible. Direct supports are hardly indicated, though he mentions the possibility of their being of some little use.

23. **Diabetes.**—Reviewing the theories of diabetes, Stark concludes with the following statements:

1. The exact truth of the pathology of diabetes is not known. 2. There are no acknowledged and constant, anatomic appearances of liver or pancreas associated with diabetes. 3. There are no characteristic lesions in any other organ. 4. An impairment of the physiologic functions of the ductless glands may be at the root of the disease. 5. Artificial glycosuria is not diabetes. The facility with which this phenomenon can be elicited, implies its insignificance as a pathologic factor. 6. As far as can be ascertained from competent sources, there is hope that the vacuum in our knowledge of the nature of diabetes will soon be filled.

Boston Medical and Surgical Journal.

April 23.

26 *The Reaction Time of Corrosive Sublimate in Different Dilutions Against Various Species of Bacteria. Charles Harrington and Harold Walker.
27 *The Cortical Cell Changes in Epilepsy; Their Significance and Clinical Interpretation. L. Pierce Clark and Thomas P. Prout.
28 Double Uterus and Vagina. C. H. Hare.
29 A Case of Uterus Bicornis Duplex, with Two Cervical Canals Above One External Os and Stricture of Vagina. W. L. Burrage.
30 Pregnancy in a Uterus Bicornis Simulating Extra-uterine Pregnancy. Frank A. Higgins.

26. **The Bactericidal Action of Corrosive Sublimate.**—Harrington and Walker have experimented on bacteria with solutions of corrosive sublimate, 1 to 1,000, 1 to 5,000, and 1 to 10,000. The authors find that the different species and different cultures of the same species vary considerably in their resistance to corrosive sublimate. In some species the resistance is markedly diminished by dryness, so that even the 1 to 10,000 solutions can destroy the germs in a short time. Some species, however, are not materially affected by dryness, thus the typhoid bacilli is much more resistant when dry than the diphtheria germ. Corrosive sublimate in as weak a solution as 1 to 5,000 is ineffective against the common pathogenic bacteria, including the pus organisms, when they are moist, excepting after prolonged contact. Since fifteen minutes' contact is not sufficient for the destruction of the *B. coli communis*, *B. pyocyaneus* and *Staphylococcus pyogenes aureus*, whether moist or dry, the use of this and of weaker preparations in surgical work and for irrigation and similar purposes should be abandoned. The 1 to 1,000 solution of corrosive sublimate is very slow in its action on some of the commonest of the skin bacteria, and since under the most favorable conditions more than ten minutes' contact may be necessary for it to kill *Staphylococcus pyogenes albus*, it should not be relied on to any great extent to ensure sterility of the hands or of instruments. The mere dipping of the hands for a few seconds into solutions of this strength can serve no useful purpose, but may lead to a false sense of security. Absolute dryness of the bacteria would be essential for the method to be effective, but this can not be insured. In any of the strengths commonly used it is a much overrated disinfectant and under the best conditions is so uncertain in its action that it would be of advantage to abandon its use altogether in surgery.

27. **Epilepsy.**—Eighteen cases of epilepsy from the Craig Colony, 7 of which died during status epilepticus, were examined microscopically as to the changes in the cortical cells and are reported by Clark and Prout. For comparative study, sections of normal brain were also used. The special conditions found in the cortical cells, especially in those of the second layer and other cells of that type, were striking and differed only in degree in the different cases. The cells were swollen, with chromatic substance almost entirely gone. The nucleus was often swollen out of proportion and ill-defined. The nucleus itself presented a finely granular appearance, and in many cases the nucleolus was dislocated in the process of section cutting. This artefact is much more frequent in these cases than in normal brains. The authors think these facts point to a destruction and ultimate disappearance of the cell as a unit in the cerebral cortex. They do not claim that this represents the final pathology of epilepsy, but the conditions indicate cell death, and teach us something as to the manner of its occurrence. The constancy of the lesion warrants the general conclusion as to the significance of the epilepsy lesion. Epilepsy they say must be considered a sensory phenomenon with motor manifestations. This is also supported by the fact of the action of the bromids, which appear to be effective on the sensory type of cells of the cortex. The anatomic and physiologic integrity of the large motor cells in the cerebral cortex shows the autonomy of these elements. They draw deductions as to the treatment and further study of the disorder from these facts. We should endeavor to exclude toxic agencies, overcome hereditary tendencies, by regulating the diet, exercise, etc., and using the bromids.

New York Medical Journal.

April 25.

31 The American Italy. Charles E. Nammack.
32 *The Kidney of Pregnancy. John O. Polak.
33 *Report of a Case of Infection by the Bacillus Coli Communis. A. Jacoby.
34 *The Surgical Treatment of Empyema. Frank McMorrow.
35 *Fatal Meningitis with Myosis and Salivary Suppression as the Only Symptoms—Autopsy—A Study in Diagnosis by Exclusion. H. Altshul.
36 Sarcoma of the Femur Following Traumatism: Amputation at the Hip-Joint by Wyeth's Method. George S. Brown.
37 *The Surgical Treatment of Ascites of Hepatic Cirrhosis, with Report of a Case. L. W. Pearson.
38 Operation in a Case of Extradural Hemorrhage the Result of Whooping Cough. George S. Brown.

32. **The Kidney of Pregnancy.**—This kidney, according to Polak, is one in which there are no inflammatory changes, but which presents a fatty infiltration of epithelial cells lining the uriniferous tubules, with anemia of the organ. The more recent opinion in regard to the changes is that they are due to imperfect metabolism and a sort of autointoxication. The indications of albumin in the urine as regards prognosis, etc., are noted. It may occur with pregnancy in the healthy woman, and is known to be present in about one-third of the cases of labor. The kidney of pregnancy in the latter part of the period is often to a certain degree pathologic, especially with primiparæ. There is liable to be more or less edema of the legs, but the condition returns to the normal immediately after delivery. The transition from the normal to the pathologic one is, however, very insidious and gradual, often culminating in eclampsia, which the author considers due to a combined toxemia produced by defective elimination from all the emunctories, but particularly the intestinal tract. When the preeclamptic state is recognized by urinary examination and the toxic symptoms like headache, neuralgia, nausea, edema, etc., the amount of nitrogenous food should be reduced and the absorption of toxic materials in the intestines and the tissues of the body be prevented and their elimination assisted by the bowel, liver, kidneys, skin and lungs. If absolutely necessary, remove the source of fetal metabolism and irritation by emptying the uterus.

33. **Infection by the Bacillus Coli Communis.**—Jacoby reports a case resembling typhoid fever, with the negative Widal reaction and the presence of *Bacillus coli communis* in large numbers in the urine. The autopsy showed no inflammatory condition of Peyer's patches, but a general congestion of the ileum and jejunum mucosa.

34. **Empyema.**—McMorrow emphasizes the importance of free opening in the pleural cavity in cases of empyema so that there can be no chance for retention of irrigated fluid or putrid secretions.

35. **Meningitis.**—From a study of his case, Altshul concludes:

1. That extensive meningitis can exist without giving rise to its characteristic and usual symptoms.
2. That sepsis does not always cause changes in pulse and temperature, and that their being normal does not warrant our excluding this condition.
3. That a spasmodic and complete occlusion of the ureter, which is not due to impaction of renal calculi, may last for some time and thus prevent the detection of extensive pyonephrosis.
4. That myosis and salivary suppression may be the first symptoms of meningitis or myelitis.

37. **The Talma-Morison Operation.**—Pearson reports a case and discusses the value of the Talma operation. He admits that it will often cure ascites, but some of the patients will nevertheless die of hepatic cirrhosis. It is often employed too late to be a fair test of the value of the operation. He thinks that a certain percentage of cases may be permanently benefited and hopes that future experience will be more cheering than that of the past.

St. Louis Medical Review.

April 18.

39 *Street-Car Colds. Fayette C. Ewing.

39. **Street-Car Colds.**—The cautions sent out by the Chicago Health Board are noticed by Ewing, who considers the conditions for acquiring street-car colds are far worse in St. Louis than in Chicago. He lays special stress on the importance of traveling on ill-ventilated street cars for long distances, and thinks that cars making long runs, compelling long-distance passengers to endure a temperature under 60 F., should be condemned as dangerous, and a menace to the health of the passengers.

Cincinnati Lancet-Clinic.

April 25.

40 *Lupus and the Finsen Ray. M. L. Heidingsfeld.
41 *A Résumé of Rectal Diseases. George J. Monroe.
42 Diet and Arterio-sclerosis. A. E. Powell.
43 Surgery of the Prostate, Pancreas, Diaphragm and Spleen (Surgery of the Pancreas). (Continued.) B. Merrill Ricketts.

40. **Lupus.**—Heidingsfeld describes the apparatus and reports several cases refractory to the *x*-ray, but relieved by the Finsen method.

41. **Rectal Diseases.**—Monroe criticises Pennington's operation for hemorrhoids, claiming that it is no improvement on the other methods of ligation, clamp and cautery, injection, and the Whitehead method.

Northwest Medicine, Seattle, Wash.

February.

44 *Uretero-cystostomy, with Traction on the Ureter. Clarence A. Smith.
45 *Beri-beri, a Clinical Study. John W. Bailey.
46 Surgery in and Around the Gall Bladder and Ducts. Casper W. Sharples.
47 *Appendicular Dyspepsia. James B. Eagleson.

March.

48 The Causes and Treatment of Hydronephrosis. J. Wesley Bovée.
49 A Report of Typhoid Fever Cases. Charles B. Ford.
50 The Behavior of the Iris in General Diseases. Hamilton Stillson.
51 *Post-Operative Hematemesis. Kenelm Winslow.

44. **Uretero-Cystostomy.**—Smith's article is a report of the experimental studies of anastomosis of the bladder and ureter under tension. He finds that by the use of an oblique anastomosis the ureter and the bladder may be united whenever they can be approximated in spite of tension. Nephritis and atrophy of the kidney on the side operated on may be a consequence, but this condition may follow any operation for ureterocystostomy.

45. **Beri-Beri.**—Bailey's article is an interesting clinical study of beri-beri as observed among the Japanese in a small settlement on Vancouver Island. His observations seem to favor the dietetic origin of the disease, a too exclusive diet of rice being conducive to the condition.

47. **Appendicular Dyspepsia.**—The dyspepsia preceding many cases of appendicitis is considered by Eagleson as not an etiologic factor, but, as a rule, the result of irritation around the appendix. He supports this view by various quotations as to the pathologic process and his own personal experience. From his study he concludes that there is a form of dyspepsia of appendicular origin, largely reflex in one class of cases, depending on the presence of a fecal concretion within the organ, or a slight ulceration or catarrhal condition of its mucosa. In another class of cases it is mechanically caused by an obstruction or irritation resulting from adhesions following a more or less acute attack of inflammation at some previous time. Such cases are suitable for surgical treatment. In case of chronic dyspepsia the condition of the appendix should be studied. When the disease has resisted all medicinal treatment and its origin has been diagnosed as appendicular, an operation should be advised.

51. **Post-Operative Hematemesis.**—Winslow reports a case occurring in his own practice. No lesion of mucous membrane was discovered on careful search. He is disinclined to accept the explanation of sepsis as the origin as offered by Rodman.

Archives of Otology, New Rochelle, N. Y.

April.

52 A Brief Report of Forty Radical Operations for Chronic Purulent Otitis and Complications, with Remarks. Arnold Knapp and C. H. R. Jordan.
53 *A Study of the Pathology of the Internal Ear and the Auditory Nerve. Paul Manasse.
54 The Usual Methods of Treatment and Operation in the Ear and Throat Clinic at Rostock. O. Koerner.
55 *After-Treatment of Radical Operations without Packing. A. von zur Muehlen.
56 An Anatomical Method of Demonstrating the Accessory Cavities of the Nose. G. Bruehl.
57 *The Contagiousness of Acute Otitis Media. L. Wolff.
58 The Occurrence of Rhodan in the Nasal Secretion, and Its Absence in Ozena. Dr. Muck.
59 Entotic Murmur Due to Aneurism of the Occipital Artery. Dr. Muck.
60 *The Masto-squamosal Suture. Dr. Aderman.
61 Acute Mastoiditis Complicated by Scleroderma. M. Kamm.
62 *On the Duplicity of the Accessory Sinuses of the Nose. G. Bruehl.
63 *Are There "Variations in the Course of the Facial Nerve Having Bearing upon the Mastoid Operation?" B. Alex. Randall.

53. **Pathology of the Internal Ear.**—Manasse reports two cases, one of multiple disseminated gray degeneration of the auditory nerve in a tuberculous patient in which the perceiving apparatus of hearing was specially involved. The anatomic changes in the internal ear in no way resembled other tuberculous processes and were very questionably tubercular. In the other case similar disturbance of the perceiving organs of hearing was observed in a syphilitic patient, but the process in the ear was also a specific one.

55. **Packing in Radical Operations.**—Von Zur Muehlen has lately modified the after-treatment of his radical mastoid operations by leaving out the packing after the first or second dressing, and he finds a decided advantage in this. The procedure of packing is often painful and difficult, especially in children, and leaving out the packing in a certain number of cases seems to shorten the length of treatment. The cavities left at the time of operation filled in with newly-formed tissue appear smaller and less deep, and, consequently are easier to oversee and keep clean. The anatomic relations under favorable conditions resemble the normal. He removes only as much of the bone as is necessary to expose the diseased bone, making the cavity as small as possible. The first tampon of iodoform gauze remains as usual for six days, the second one, introduced much more loosely, remains only two or three, eight days being sufficient to fixate the flap. As soon as this is accomplished he leaves off packing. If subsequent packing seems desirable he introduces it as loosely as possible and dispenses with it as soon as he can. The wound is dressed every day and the area irrigated with warm water, and in case of fetid discharge 10 per cent. naphthalin solution is of use.

57. **Otitis Media.**—Wolff has observed the simultaneous occurrence of otitis media in several members of the same family and follows Lermoyez in considering the condition a contagious one.

60. **The Masto-Squamosal Suture.**—From a study of a large number of skulls Aderman finds that the masto-squamosal suture is distinctly more frequent than is held by Kieselbach and Kirchner, who had previously investigated the subject. He examined 2,554 skulls. In 1,413 of unknown age, 219 presented distinct sutures on both sides; in 54 the suture was distinct on one side and a trace on the other; and in 7 it was unilateral. He has not been able to find any particular racial difference as to the frequency of the suture with the exception of the negro skull, in which it seems to be less frequent than in others.

62. **Duplicity of the Accessory Sinuses.**—Bruehl finds that the double cavity is frequently encountered in frontal and sphenoidal sinuses, but rarely in the maxillary antrum. Anatomic investigation shows that in most cases this is due

to the ethmoidal cells which have extended to the frontal bone, the sphenoid bone and the superior maxillary. A true duplication of the accessory sinus due to a division of the rudimentary condition is extremely rare.

63. The Facial Nerve.—The danger of encountering the facial nerve in operations on the carious middle-ear has been noticed by various authors, and special stress laid on the variability of the course of the facial canal. Randall has studied this subject and finds that the variance is far less frequent and extensive than has been claimed, and that the descending course of the facial nerve to its stylo-mastoid exit is in all the cases studied almost exactly vertical and crosses the oblique plane of the drumhead some 3 mm. back of the middle of the posterior margin of the annulus. Therefore, in removing the back wall of the meatus we should aim to cut a little below the tympano-mastoid suture if we are to keep in safe territory.

American Journal of Obstetrics, New York.

April.

64 *What Is Eclampsia? Samuel W. Bandler.
65 *Utero-vaginal Tamponade: Its Obstetric Uses. Joseph B. De Lee.
66 *Primary Carcinoma of the Urethra in the Female. J. F. Percy.
67 *Constipation as an Etiological Factor in Eclampsia. John Aspell.
68 *A Plea for "Bloodless" Surgery in Gynecology. O. B. Will.

64. Eclampsia.—Bandler emphasizes the importance of internal secretions of the ovary and placenta as a pathologic element in eclampsia. A lack of proper control of the placental secretion by the ovarian, and malsecretion on the part of the placental gland, or preferably, a relative malsecretion due to insufficient or abnormal modification of the placental secretion by the elements furnished by the ovaries, furnishes, he thinks, the most plausible and logical explanation of the lesions of eclampsia.

65. Utero-Vaginal Tamponade.—The utility and disadvantages of this procedure are discussed by De Lee, who finds it especially useful in the stoppage of hemorrhage, especially postpartum, after operative procedures; and in cases of cesarean section it may be necessary to tampon the uterus because of atony. He advises the use of a single piece of gauze on account of facilitating removal, and removing it in 16 to 36 hours. It stimulates the uterus to contract, tampons directly the site of the hemorrhage, favors clotting of blood in its meshes, fills up an empty uterus and lifts up and supports the uterus, relieving it of congestion. He is willing to admit that it sometimes has disadvantages, and sometimes women are tamponed that could get along without it. In fact, perhaps this is true of many of his own cases, but what one considers necessary to do in cases of postpartum hemorrhage depends on the standard of obstetrics practiced. The present obstetrical standard is not attempting to save the woman's life, and most of the babies; we must save all the women and the babies that are healthy, and secure them against bad consequences. He has seen the effects of hemorrhage last for months and years, and the loss of over a pint of blood at labor should be prevented. He has found but little use for the measure in placenta previa, excepting where it is necessary to tampon the patient while waiting for help or instruments. It is one of the milder measures to induce labor and is useful in certain cases of abortion. He advises, however, the passing of a thin strip of gauze into the uterus in cases where part of the ovum is expelled and it is impossible to take away the rest, then tampon the vagina tightly with sterile gauze and leave the case until next day. The cervix will then be found soft and easily dilatable, if not fully dilated, and the gauze, with uterine contents, expelled on top of the cotton tampon. As a means of carrying medication to the parturient tract, he considers its usefulness very restricted; indeed, the method is capable of much harm. Constant manipulation of an infected uterus by douches, curettage, medicinal applications, packing, etc., only aggravates things.

66. Carcinoma of the Urethra.—Percy reports a case at length and tabulates a number of others from the literature. From his search and correspondence he has come to the conclusion that cancer of the urethra is as rare as he was at first inclined to believe. He also in this paper calls attention to the more important pathologic conditions that may be confounded with primary cancer of this part, such as syphilitic disease, etc. As regards treatment he says he can repeat that the axiom of free and wide incision holds in the treatment of this condition.

67. Constipation as a Factor in Eclampsia.—Aspell calls attention to this factor in the causation of eclampsia and reports several cases. All the patients were constipated and had had no exercise in the open air for weeks before the attacks. He is, therefore, inclined to look to the liver as being the source of the toxic influence that produces the convulsions.

68. Bloodless Surgery in Gynecology.—Will's article is a plea for massage and manipulation to break up adhesions and reduce displacements, together with the use of pessaries and vaginal tampons to retain them. Other conditions also are amenable to this method. Chronic inflammation, neuralgias, morbid changes in the ovaries, etc., may be favorably affected and subdued by resort to compression, stretching and friction sufficient in degree to produce radical changes in the structure and renewed nervous and vascular activity.

American Gynecology, New York.

March.

69 *A New Method of Suturing the Fascia and Levator Ani Muscle in Perineorrhaphy; Also an Operation for Complete Laceration of the Perineum Designed for the Purpose of Eliminating Danger of Infection from the Rectum. George H. Noble.
70 Pus in the Female Pelvis. John B. Deaver.
71 *A New Method of Treating the Suppurating Abdominal Incision. Wm. Edgar Darnall.
72 The Constituents of the Colloid of an Uterine Fibroma. Torald Sollmann.
73 *The Age of First Menstruation at Pole and Equator. George J. Engelmann.

69.—The second division of this article appeared in THE JOURNAL, Aug. 9, 1902, p. 302.

71. Suppurating Abdominal Incisions.—In case an abdominal incision for laparotomy suppurates and requires to be re-opened, Darnall would use hydrogen peroxid and formalin and a solution of the newer silver salts or a weak bichlorid of mercury solution until the profuse discharge of pus can be stopped. Then he closes such a wound by slightly anesthetizing the patient, curetting the sides of the incision to freshen up the granulations, placing in the bottom of the wound a narrow strip of iodoform gauze or a few strands of silkworm gut for drainage, and then laying a strip of zinc oxid adhesive plaster about 6 cm. wide in each side of the incision and about 2 cm. from its margin and passing an interrupted suture between the inner edges of the adhesive plaster across the incision without penetrating the skin. An assistant brings the edges of the incision together over the drain by using pressure from each side of the wound. The sutures are now tied tightly across the incision, closely approximating its sides and union takes place promptly, leaving only a straight line scar when the drain is removed.

73. The Age of First Menstruation.—Engelmann has investigated the subject of the appearance of first menstruation and finds it is quite different from the ordinary conception; instead of there being precocious puberty in the tropics and late in the arctic regions, the reverse is often the case. Early puberty is the rule at the arctic region rather than at the equator. The mental factor has much to do with the early development of the function, and he suggests that the carnivorous diet and the habits of the Eskimo may account for their early development, while in the tropics the only possible explanation for the retarded development is perhaps to be found in the torpid nervous system.

American Journal of the Medical Sciences, Philadelphia.

April.

74 *A Contribution to the Anatomy and Surgery of the Temporal Bone. A. E. Schmitt.
75 Gangrenous Cholecystitis, with a Report of a Case in Which a Successful Cholecystectomy Was Done. John H. Gibbon.
76 *Jaundice, with Reports of Interesting Illustrative Cases—A Contribution to the Toxic Forms of This Condition. James M. Anders.
77 *Abscesses of the Liver Following Typhoid Fever. James G. Sheldon.

78 *A Preliminary Communication Concerning the Nature and Treatment of Recurrent Vomiting in Children. David L. Edsall.
79 *Unilateral Renal Hematuria. Augustus A. Eshner.
80 Bence Jones Albumosuria with Peculiar Nervous Phenomena. L. Napoleon Boston.
81 *On a New Method for the Application of Widal's Test for the Diagnosis of Typhoid Fever. Arthur J. Wolff.
82 *Late Systolic Mitral Murmurs. J. N. Hall.
83 *Concerning the Rôle of Intracellular Catalytic Processes in the Pathogenesis of Malignant Neoplasms. John C. Hemmeter.
84 Rubber Tissue as a Dressing. G. Tucker Smith.

74. **Surgery of the Temporal Bone.**—Schmitt's article is an elaborate description of the temporal bone, its anatomy and the surgical technic of the operations involving it.

76. **Toxic Jaundice.**—Anders reports cases which, while not furnishing a basis for definite conclusions, suggest the following queries and propositions:

1. Is there a true polycholia due to the conversion into bile pigment of the hemoglobin that is *suddenly* liberated by certain poisons, as ether, chloroform, and the like, or the toxins of the acute infections, as, for example, lobar pneumonia? 2. Doubtless other causative agents are often operative in cases that fall under 1. 3. As there could be no jaundice without the presence of the liver, the term "hematogenous" is misleading, and should be regarded as obsolete; the term "toxemic jaundice" may be, however, appropriately applied to the cases of "hepatogenous" icterus, in which the blood changes are a more or less striking pathological feature. 4. May not the jaundice rarely seen in secondary syphilis be toxic in nature, at times at least, rather than purely "hepatogenous"? 5. Admitting that there are well-established causes for the hepatic cirrhosis, more particularly of the atrophic form, the etiology is but imperfectly understood. 6. Clear evidence to show that the hepatic cirrhoses are, in many cases at least, of microbic origin is accumulating. 7. The intercurrent acute inflammatory conditions with jaundice in the course of cirrhosis of the liver are doubtless micro-organismal in nature. 8. Relapsing febrile jaundice is also to be classified as an infection; it will probably be shown on further investigation to be due to a member of the colon group. 9. It is probable that the jaundice of hepatic cirrhosis is, in a certain sense at least, toxic in nature.

77. **Typhoid Abscess of the Liver.**—Beginning with a case reported in full, Sheldon discusses the subject of hepatic abscess from typhoid, reviewing the literature and ending with a number of similar cases that have been reported. He finds that the symptoms extend over varying periods. The cases that recovered were undoubtedly the result of pylephlebitis. He can not find a record of a case of hepatic abscess of arterial origin that got well. Prognosis in the cases following typhoid is always grave, and death may be expected in all cases associated with suppurative foci elsewhere in the body. The diagnosis is sometimes easy, but may be difficult or impossible. The treatment is always surgical.

78. **Recurrent Vomiting in Children.**—Edsall discusses this condition and concludes that there is a severe acid intoxication at the time of the attack, not during the interval, of the type seen in diabetes mellitus and occasionally in other conditions. The treatment directed to this acid intoxication is by full dosing with alkalies, which has been in his cases strikingly successful, excepting in one in which the results are still in suspense. He has found in the urine of cases acetone and diacetic acid and notes Marfan's experience, who has also found acetone in the urine in the beginning of the attacks. He disagrees with the latter's theory as to its being due to acetonemia, and considers the cases as confirmatory of his own views. He admits that it is possible that some cases may not have been dependent on the same primary disorder, but it will be an easy matter to determine when this intoxication is present and how frequently flooding the organism with alkalies will prove to be an effectual treatment.

79. **Unilateral Renal Hematuria.**—Eshner reports a case of renal calculus with hematuria in which after the kidney was exposed and found apparently healthy and left undisturbed the symptoms permanently disappeared. He has collected from the literature a number of similar cases and concludes that there are occasional occurrences, in men and women alike, mostly at middle adult life, of hemorrhage from a single kidney—from either with equal frequency, in many instances in consequence of demonstrable organic disorder, and in the remainder of obscure and undetermined origin. This hematuria may cease after simple exposure of the kidney or after nephropexy or nephrotomy, or in the failure of these, after nephrectomy. Since the preparation of his paper he has come across the report of an additional case in which slight mobility of the kidney was accompanied with profuse hematuria.

81. **The Widal Reaction.**—Wolff has modified the Wyatt Johnson method; taking a loop from the feces, smearing it on the agar slant in prepared tube and making one or more bouillon cultures from this specimen. The bouillon must react from 1 to 2 per cent. alkaline with the decinormal acid, using phenol phthalein as an indicator. The infected bouillon is incubated at the usual temperature for twelve hours, when an examination can be made. A sample of blood is taken at the same time a specimen of the feces is procured. This is mixed with the bouillon culture as usual and placed on the microscope stage. If there is sufficient agglutinating material present, the typhoid bacilli, if they exist in the cultures, will shortly form clumps in the field. The rest of the field will be observed full of colon bacilli in active motion. If this same reaction occurs with the patient's own blood we can, of course, safely say that the case has advanced at least to the second stage of the disease. Should no reaction take place, another sample of bouillon culture is tested with blood from advanced cases of typhoid, the agglutinating power of which has been tested by the ordinary method of pure typhoid culture. It is necessary for the proper use of this test to keep in stock a number of specimens of blood from well-marked cases, and if kept in a dry place they retain their effectiveness probably indefinitely. With this blood, if the feces contain any typhoid bacilli, a positive and distinct reaction will shortly occur, while the still motile colon bacilli occupy the rest of the field. This indicates that the case is one of typhoid, and that the disease is in the early stage from the middle to the end of the first week. By this method we can make an early diagnosis and also be able to state that the patient has advanced into the second week of the disease, or beyond the seventh day. He has made a number of tests of this method and has in no case had even a doubtful reaction.

82. **Late Systolic Mitral Murmurs.**—Hall concludes from a study of the subject and of typical cases that in a general way we can explain these murmurs by an asynchronous ventricular contraction.

83. **Malignant Neoplasms.**—Hemmeter has studied the pathogenicity of cancer from the standpoint of the chemist and physiologist. He reviews the various hypotheses and points out the difficulties in the way of the parasitic theory. The paper is largely a report of experimental observations and a number of interesting points and suggestions are thrown out. He admits the possible traumatic origin of adenoma and discusses the effect of the ordinary causes on cell division and the influence of physical laws on cell growth. He believes in intracellular catalyzers and the derangement of intracellular catalysis as a factor in producing malignant growths. In conclusion, he suggests that possibly the blood serum contains defensive substances effective in the destruction of cancer cells, and from this deduces the possible hope for a successful form of treatment.

Medicine, Detroit, Mich.

April.

85 *The Sudden Atrophic Influence of Craniospinal Nerves, with Report of Case. F. E. Coulter.
86 Clinical Experiences with Acetozone. Wm. Parsons.
87 Turbinotomy. James M. Brown.
88 Bacteriologic Study of the Blood in 30 Cases of Clinical Typhoid Fever, 2 of Which Proved to Be Paratyphoid and One Doubtful. E. H. Ruediger.
89 The Surgery of the General Practitioner. Raymond C. Turck.
90 *Responsibility in Active Algophily. J. G. Kiernan.

85. **Nervous Alopecia.**—Coulter reports a case in a child 7 years of age who, subsequent to convulsions, lost her hair from the area behind her ears on both sides. The new growth was irregular, lighter in color, finer and softer to the touch than the normal. The areas were nearly symmetrical on both sides, though extending a little more anteriorly on the left. He considers that in certain conditions the cranio-spinal nerves may have a sudden atrophic influence on the skin and its appendages. The nutritive difficulty, he thinks, was transitory as the hair is approaching more the normal condition. He suggests a blood condition, a toxin formed by a very sudden and severe convulsive stage, manifesting itself in this particular

area because of some special histologic character in the nerve trunk as yet undetected.

90. **Algophily.**—The medicolegal relations of this form of sexual perversion are discussed by Kiernan. He thinks that in many of these cases the responsibility is not destroyed.

University of Pennsylvania Medical Bulletin, Philadelphia.

April.

91 *Effects on the Nervous System of Electric Currents of High Potential, Considered Clinically and Medicolegally. Charles K. Mills and Theodore H. Weisenburg.
92 A Case of Intradural Spinal Cyst, with Operation and Recovery. W. G. Spiller, J. H. Musser and Edward Martin.
93 A Case of Spasmodic Torticollis Unsuccessfully Treated by Hypodermic Injections of Atropin. Charles S. Potts.
94 *Anno Noki, or Bushi: The Arrow Poison of the Ainus. Edward T. Reichert.
95 *A Consideration of the Facial Reflexes and Nerve and Muscle Phenomena in the Distribution of the Fifth and Seventh Nerves. T. H. Weisenburg.
96 *Experiments in Disinfection with Formaldehyd Gas. Mazyck P. Ravenel and S. H. Gilliland.
97 A Simple Humane Holder for Small Animals Under Experiment. J. Edwin Sweet.
98 Two Cases of Tic Douloureux Treated Hypodermically with Massive Doses of Strychnin. Charles S. Potts.

91. **Accidents from Electric Currents.**—Mills and Weisenburg report a case of apparent bulbar spinal paralysis or myasthenia gravis due to frequently repeated small electrical shocks. There was a late appearing general paralysis of nearly all the musculature, with loss of reflexes. The pathology of the condition is discussed and also the medicolegal bearings of the effects of electric currents of high potential.

94. **Anno Noki or Bushi.**—This substance, the arrow poison of the Ainus of Northern Japan, is described by Reichert, who holds that there is no doubt that it is essentially or solely an inspissated extract of the aconitum frischeri. The experiments which he has made on dogs seem to leave little doubt as to this, as its physiologic action was clearly that of aconite.

95. **Facial Reflexes.**—The reflexes and muscular phenomena in the distribution of the fifth and seventh nerves are reviewed by Weisenburg. The ophthalmic and supraorbital reflex, first mentioned by Overend in 1896 and later by McCarthy, is obtained by striking a light blow with a percussion hammer over the distribution of the supraorbital nerve, the eyes open. A fine fibrillary tremor is first observed in the lower eyelid, and on gradually approaching the tapping to the eyebrows the tremor becomes coarser, the upper lid also being involved and slight approximation produced. This has been found absent in peripheral facial paralysis where the upper branch of the seventh nerve has been involved, and in cases where the Gasserian ganglion has been removed. Weisenburg has found it lacking in superficial facial palsy, but in a large proportion of brain or cord lesions it is normal. The lachrymal reflex may be produced by irritating the nasal mucous membrane, an increased secretion of tears resulting. Care should be taken to avoid a strong light on the eye. This reflex is present in hysterical anesthesia or conjunctivitis, but is diminished where the Gasserian ganglion has been removed. Weisenburg found it diminished in three cases of hemiplegia and hemianesthesia. The cornea mandibular reflex described by von Solder in 1902 is produced by touching the cornea and is shown by a movement of the lower jaw to the side opposite the irritated cornea. The mouth must be partly opened and the lower lid held down for the purpose of observation. The reflex arc is contained in the sensory and motor fibers of the fifth nerve. It is not always present in normal persons, is easily exhausted, but soon restored. Chvostek, in 1876, described the phenomenon named after him, where, as in cases of tetany, by striking over the pes anserinus and in some cases a mere stroking, a spasm of all the muscles of the facial distribution is produced. He thought it was due to a heightening of the mechanical irritability of the facial nerve. It has been found in a variety of conditions, as in hysteria, neurasthenia, epilepsy, tubercular and rachitic conditions, bulbar paralysis, spinal tumors and the late stages of facial paralysis. The malar phenomenon described by Bechterew is the reflex produced by percussion over the malar bone resulting in an upward and backward movement of the corner of the mouth. Weisenburg found this phenomenon not at all constant. The risorius phenomenon is caused by percussion over the angle of the lower jaw, producing retraction of the corner of the mouth backward and slightly downward. The risorius muscle can be distinctly seen contracting. He has observed this in a case of peripheral facial palsy on the affected side, in epilepsy on one side, and in two cases of cerebrospinal syphilis with basal involvement. The last reflex noticed is the depressor labii inferioris phenomenon, caused by percussion over the side of the lower jaw, about an inch and a half back of the symphysis, producing a retraction downward of one side of the lower lip. It is due to irritation of the supramaxillary branch of the lower division of the facial nerve, which supplies the depressor labii inferioris. In some cases, instead of producing a depression of the lip, it produces an upward movement of the same. This is most probably, also, a phase of the Chvostek phenomena.

96. **Formaldehyd.**—Ravenel and Gilliland conclude the report of their experimental study, with the following:

> 1. Formaldehyd gas well deserves the high place which has been accorded it as a germicide. 2. The employment of special apparatus for generation of the gas, while convenient, is not requisite for its successful application, and no one should be discouraged from using it by the lack of such appliances. 3. The germicidal action of formaldehyd gas is largely controlled by certain factors which are, as yet, imperfectly understood. Other things being equal, the most important of these are moisture and temperature. 4. Each operation must be controlled by the exposure of test cultures distributed in every portion of the room to be disinfected, and no operation is to be regarded as successful until all such cultures are proven to have been destroyed.

Northwestern Lancet, Minneapolis, Minn.

April 15.

99 The Chronic Round, Septic, Perforating Ulcer of the Stomach. Gustav Fütterer.
100 Gastric Ulcer from a Surgical Point of View. James H. Dunn.

Woman's Medical Journal, Toledo, Ohio.

March.

101 Medical Gleanings in Europe and the Far East. Fredericka C. Zeller.
102 Contributions of the New Psychology to Medicine. Mary L. Neff.

Western Medical Review, Lincoln, Neb.

April 15.

103 Diagnosis of Diastolic Heart Sounds. LeRoy Crummer.
104 Syphilitic Affections of the Eye. H. B. Lemere.
105 Syphilis of the Nervous System. F. E. Coulter.
106 Treatment for Relief of Nasal Reflexes, with Report of Cases. F. W. Dean.
107 Diagnosis and Treatment of Chronic Gastritis. Alfred O. Peterson.

Medical Examiner and Practitioner, New York.

April.

108 The Problem of Tuberculosis. S. Eisenstaedt.
109 Chronic Nephritis Unaccompanied by Albuminuria. Arthur R. Elliott.
110 Appendicitis. Robert Abbe.
111 A Résumé of the Most Potent Factors of Disease and Death in the World's History, with a Review of Modern Prophylaxis. (Continued.) W. H. Irvine.
112 Some Phases of Albuminuria. William S. Gordon.

Journal of Cutaneous Diseases, New York.

April.

113 Erythrodermie Pityriasique en Plaques Disseminées. Charles J. White.
114 Myositis Syphilitica. J. A. Fordyce.
115 A New Form of Focus Tube. Charles Warrenne Allen.

Old Dominion Journal, Richmond, Va.

April.

116 Mouth Breathing. Clifton M. Miller.
117 Condylomata Vulvæ. Greer Baughman.
118 The Digestive Disorders of Pregnancy. John W. Scott.
119 Chloroform as a Surgical Anesthetic and Its Administration. F. Manfred Call.
120 The Burial of Ophelia. William H. Taylor.

Proceedings of the Pathological Society of Philadelphia.

April.

121 A New Hemo-alkalimeter. Arthur Dare.
122 Preliminary Report of a Study of the Urine for Tubercle Bacilli in Cases of Tuberculosis (60 Cases). L. F. Flick and Jos. Walsh.
123 Two Examples of Lesions of the Jaw. M. H. Cryer.

Medical and Surgical Monitor, Indianapolis.

April 15.

124 Goiter—Exophthalmic Goiter—Cretinism. John E. Lockridge.
125 The Virtue of Valerian Samuel E. Earp.
126 Some Elements to Be Considered in Urinalysis. J. W. Crismond.
127 The Importance of Heat, Water, Electricity and Diet in the Treatment of Rheumatism. Alfred S. Jaeger.
128 Neurasthenia. W. H. Williams.

Alabama Medical Journal, Birmingham.

April.

129 Mastoiditis. L. G. Woodson.
130 Puerperal Sepsis, with Report of Cases. J. C. Abernathy.
131 Contract Doctor. M. H. Collins.
132 Adenoids. S. L. Ledbetter.
133 X-Ray Therapy. J. D. Gibson.

Southern California Practitioner, Los Angeles, Cal.

April.

134 Municipal and Personal Hygiene. J. McFadden Gaston.
135 Cystitis in the Female. Charles D. Lockwood.
136 Roentgen Rays in the Diagnosis of Gallstones. Albert Solland.
137 Some Remarks upon Ethmoidal Disease. Ernest W. Fleming.

Pacific Medical Journal, San Francisco.

April.

138 Chronic Cough of the Aged—Its Rational Treatment. G. A. Gilbert.
139 Appendicitis. Winslow Anderson.
140 The Advantages of the Vaginal Operation in Obese Patients. W. H. Humiston.
141 Specific in Pneumonia. H. B. Stanley.

Medical Bulletin, Philadelphia.

April.

142 Alopecia Circumscripta—Chronic Eczema—Ichthyosis. John V. Shoemaker.
143 The Treatment of Pleurisy with Effusion. George W. Pfromm.

Vermont Medical Monthly, Burlington.

March 25.

144 The Regular Treatment of Pneumonia. W. W. Browne.
145 The Homeopathic Treatment of Pneumonia. Edgar A. Fisher.
146 The Eclectic Treatment of Pneumonia. Pitts Edwin Howes.
147 The Alkaloidal Treatment of Pneumonia. Wm. L. Johnson.
148 A Report of Two Cases of Septicemia, Successfully Treated with H_2O_2 Medicinal. E. J. Melville.

Bulletin of the American Academy of Medicine, Easton, Pa.

April.

149 *May a Hospital Steal? P. Maxwell Foshay.
150 Politics in the Medical Profession. Donly C. Hawley.
151 *Compensation for Medical Services Rendered the State. T. D. Davis.
152 *The Political Side of Medicine. John B. Roberts.
153 *Medical Representation in Hospital Management. Augustus A. Eshner.
154 The Personal Equation in Examinations for Licensure. Charles McIntire.

149.—See abstract in The Journal, xxxviii, p. 1665.

151.—Ibid.

152.—Ibid.

153.—Ibid.

Mobile Medical and Surgical Journal.

April.

155 Infant Feeding. P. M. Lightfoot.
156 The Early Diagnosis of Smallpox, and Its Importance to the Physician and to the Public Generally. Julius Jones.
157 Ergot: Its Uses and Abuses. G. R. Burney.
158 Surgical Clinics at Mobile City Hospital. W. R. Jackson.
159 Some Further Observations in the Treatment of Typhoid Fever. O. L. Shivers.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

April 18.

1 *Gastric Hyperacidity (Hyperchlorhydria). William Russell.
2 *The Operative Treatment of Enlarged Prostate. William Thomson.
3 *Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. Freyer.
4 On the Operative Treatment of Prostatic Obstruction. F. A. Southam.
5 *Note upon a Possible Relationship between Carcinoma and Nerve or Trophic [illegible] Cheatle.
6 *On the Etiology of [illegible] Annibal Bettencourt, Ayres Kopke, Gomes [illegible] Correia Mendes.
7 Note of Some Further Experiments Regarding the Nature and Specific Treatment of Hay Fever. Felix Semon.

1. **Gastric Hyperacidity.**—The comparatively recent recognition of the cause of dyspepsia by excess of hydrochloric acid is Russell's subject. In his method of examination he questions the patient as to each symptom throughout the day, with special reference to the time of meals, intervals of relief, time of recurrence of pain or discomfort, etc. He explains the symptoms by the excess of hydrochloric acid digesting the proteid element and leaving the starchy food unaltered as an irritant, keeping up gastric secretion after the normal period of digestion and beyond what can be utilized. He considers this in part due to a special dyscrasia and is willing to admit this among our list of constitutional conditions. The neurotic theory is rejected. He finds this variety common; about 25 per cent. of the dyspeptic cases in the Royal Edinburgh Infirmary came under this category. As regards treatment the correction of constipation may suffice in mild cases. In other cases the use of alkalies taken sometime before food neutralizes any acid residuum facilitating the transformation of the starchy elements, which is in accordance with Pawlow's work on the secretions of the digestive glands. The diet must be regulated by the severity of the symptoms. Proteids ought to be reduced to a physiologic minimum and should be so selected and cooked as to be easy of digestion. The starches should be as much altered as possible, and the quantity of food should not exceed the physiologic requirements.

2. **Enlarged Prostate.**—Thomson favors the suprapubic method, considering the objections as to the danger of extravasation, sepsis and tediousness of recovery as of slight importance. The objections to the perineal route seem to him more weighty; the difficulty in reaching the enlarged organ, the impossibility of making a complete exploration of the bladder, and the danger of missing an encysted or loose calculus. There are cases, however, where operations through the perineum may be advisable, such as cases of extensive adipose development, and in case of small prostate. He calls attention to the predominance of the lateral lobes as obstruction, the fact that the bulk of the prostate is felt in the rectum gives no indication of its intravesical contour and the fact that the size of the prostate has no necessary relation with the severity of the urinary symptoms. While hemorrhage is usually controlled by hot boric solution and does not long continue, it may be advisable to utilize some contrivance to prevent it, and he illustrates a rubber pad, which is introduced through the wound and is attached to a string passed through the urethra by which it can be fitted against the prostatic scar and another string attached to its edge allows of its removal when required. Thomson has no doubt as to the possibility of enucleation in enlarged prostate.

3. **Enlarged Prostate.**—Freyer briefly reports cases and sums up his experience in 31 cases of complete removal within two years in patients varying in age from 58 to 79 years with prostates weighing from 1.5 to 10.25 ounces. A very large proportion of the patients were almost moribund when operated on; scarcely any of them were free from serious complications; 22 of the cases were perfect successes, both immediate and remote, and he means by this complete recovery, the patients being able to retain and pass their urine as well as ever. In no case has there been any relapse, time seems only to consolidate the cures. There were four fatalities, 2 from mania after the operative wound had practically healed and the functions become normal, 1 from heatstroke during convalescence and 1 from coma due to retention of morbid products of the urine in the blood, which had set in before operation. In only one of the four cases could death be attributed to the operation. In all his cases Freyer used the suprapubic method.

5. **Carcinoma.**—Cheatle illustrates cases of rodent ulcer as the most common form of cancer in which secondary deposits in the lymphatic glands are rare and in which the morbid processes are largely confined to certain special nerve areas or branches of the fifth nerve; also cases of squamous epithelioma. He shows that rodent ulcers may be multiple on the two areas of the fifth nerves at the same time; and that they may be multiple on the area of one fifth nerve; and no lesion elsewhere. He notes that cancer belongs to a period of bodily degeneration as a point which is of some importance. He found in one case a degeneration of the posterior ganglion of the spinal nerve supplying the part occupied by the cancer, and this agrees with Lugaro's findings of the effects of peripheral irritation on the effects of the posterior root ganglia. He does not wish to infer that a ganglion degeneration preceded the carcinoma, but can not help alluding to the clinical fact that irritation is a great precursor of cancer, and added to this it causes degeneration in the particular ganglia whose peripheral ramifications

are irritated. Carcinoma often appears in tissues which are associated with disorders of growth, like moles, and these latter are themselves associated with definite nerve areas in the incidence of cancer. He does not want to be taken as offering a new theory of cancer but merely as attempting to show the grounds for considering the possibility that the genesis and spread of cancer may be connected directly or indirectly with the nerve influences, which preside over the areas affected.

6. **Sleeping Sickness.**—The members of the Portugese commission to investigate the cause of sleeping sickness argue for the identity of the streptococcus described by Castellani with their own previously reported type and point out the common characters. While they claim priority they admit the independence of Castellani's work and its importance as a verification of their own.

The Lancet, London.

April 18.

8 *Infective Endocarditis Mainly in Its Clinical Aspects. T. R. Glynn.
9 *An Analysis of 22 Cases of Sudanese Leprosy. T. J. Tonkin.
10 *Nerve Suture and Nerve Regeneration. Paul B. Henriksen.
11 Three Cases of Ligature of the Common Carotid Artery. W. J. Collins.
12 Narcotile, Bichlorid of Methyl-ethylene: A New General Anesthetic. Tom Eastham.
13 *The Treatment of Epilepsy by Psychical Methods. H. Campbell Thomson.
14 A New Method of Treating Suppurating Catarrh of the Middle Ear. Albert A. Gray.
15 A Case of Acute Trional Poisoning; Remarks. F. P. Wightwick and H. D. Rolleston.
16 Two Cases of Tubal Gestation with Operation: Recovery. Russell Coombe.

8. **Infective Endocarditis.**—Glynn's second lecture discusses the mode of entrance of the pathogenic organisms. He thinks entrance is often through the lungs and air passages or mouth. The aortic and mitral valves were involved in 21 of his cases, the aortic in 10, the mitral in 15, and the endocardium or the ventricles alone in 1. In a number of his cases there were congenital cardiac defects, stenosis of the pulmonary valves, imperfect ventricular septum, etc. The vegetations in the disease are usually of considerable size and infarcts or emboli occur nearly three times as frequently in the infective cases as in the simple cases of endocarditis, though less commonly in the lungs where suppuration or infarcts rarely occur. This does not mean that the emboli causing these were benign. His classification of endocarditis is according to the severity and the duration of the symptoms: acute, subacute and chronic. The character of the temperature offers some indications of the type and the severity, and more frequently pursues an anomalous course in the protracted forms of the disease. In only a very few were there rigors; fever is often fugitive so that the temperature must be taken often.

9. **Leprosy in the Soudan.**—Tonkin gives the results of study of 220 cases of leprosy in the central Soudan. He finds that the macular variety predominates, while the tubercular type is comparatively infrequent. Males appear to be more subject than females. A very large proportion of cases occur at an early age, from 6 to 20 years, which is not in accordance with observations elsewhere. The primary characteristic lesions were more frequent on the face, the outer surface of the extremities, the scapular region and the buttocks. He has never seen the nodules on the palms or soles of the feet, though the outer borders are often the seat of a dense leprous infiltration. He tabulates the duration of the disease in his cases, which ranges from 1 to 55 years. He has little doubt of the possibility of leprosy undergoing a spontaneous cure. He thinks leprosy seldom lasts more than twenty years in any person. If one lives longer, the disease has terminated. In the post-leprous period there appears to be good general health, though there may be evidences of former trouble in the mutilations, etc. The hereditary element is slight and has very little support from his researches. Very few of the cases observed were descended from leprous parents or grandparents. Leprosy is a disease that itself tends to sterility, the average number of children from leprous husbands and healthy wives was less than one and from both parents leprous not more than one and a fraction per couple. Predisposition is not specific. It often occurs in those that have had no leprous ancestors, and he thinks that deficiencies of diet have much to do with it. Wherever leprosy exists we have certain habits as regards clothing, bedding, etc., and a super-carbohydrate diet which leaves a good deal to be desired. In the Soudan the clothing is rarely washed and handed about freely from person to person. The natives show an utter indifference to the disease.

10. **Nerve Regeneration.**—Henriksen's paper is a full study of the disorders affecting the division of the nerves, showing a regeneration in both the peripheral as well as the central sections. When the nerve is divided it loses its motor conductibility after some little time, and he does not think a certain degree of capability is impossible, for sensory conduction may exist during the whole process of regeneration. The further from the periphery the nerve is hurt the longer time it will take before motor power may be affected and the slower the recovery, but this is not evidence that the nerve is growing out from the central end as held by Vanlair and others. Experiments on animals show that the divided nerve unites equally rapidly whether it is sutured or not, but this does not make it inadvisable to suture as circumstances may take place to prevent union and function. Infection of the wound is of fatal significance, leading to the formation of dense scar tissue and there may be dislocation of the ends of the nerves. If union of the nerve has not occurred or if it is incomplete, examination of sensation shows when interference is required. After about three weeks the tissues at the ends of the nerves are transformed into dense scar tissue which is an obstacle to further development. At the same time a corresponding muscle change will take place and no complete recovery may be expected. It is not absolutely necessary, as shown by experiments, that the ends of the nerves should be at first in absolute contact. The time that may elapse before operation is done without the risk of slow and possibly incomplete recovery may scarcely be estimated at more than about one month. New nerve fibers grow most rapidly the first few weeks, and if union does occur it will be rapidly succeeded by recovery of sensation. If sensation does not return, or if it is incomplete or is proceeding slowly at the time scar tissue has been formed, it means that serious obstacles to the union of the nerve are present and that complete restitution of function can not be expected without operation. Still secondary suture may be performed with good results after a long lapse of time. Jessop reports a case where after the lapse of nine years after division of the ulnar nerve above the wrist, there was still complete anesthesia and paralysis. A secondary suture was performed with the result that sensation returned after eight days, motor power after ten weeks and full restitution after nine months. The important thing in either primary or secondary suture is asepsis. In secondary suture it is important that not only all the scar tissue should be removed, but also that the uppermost part of the end of the nerve should be cut off, the nerve fibers being buried in dense connective tissue.

13. **The Psychic Treatment of Epilepsy.**—The effects of psychic conditions on epilepsy are noticed by Thomson and deductions made as regards the use of psychic stimulus. He quotes from J. W. White's well-known article on the supposedly curative effects of operations *per se* and also from the recent work of Boris Sidis on psychopathic researches in mental dissociation as suggesting the value of the psychic treatment. He also reports the case of a patient which he has carefully studied who has been able by will power not only to ward off attacks, but to retain consciousness of events going on during the partially complete attacks. The author firmly insists on the importance of the early diagnosis of epilepsy so as to prevent the growth of the epileptic habit and the loss of inhibitory power.

Bulletin de l'Academie de Medecine, Paris.

17 (No. 12.) *Guaiacolated and Camphorated Oil in Incipient Infection. Matignon and Bernex.—De la valeur thérapeutique des injections souscutanées d'huile camphrée gaiacolée dans certaines infections au début.
18 *Sur le séparateur des urines de M. Luys et ses applications. Le Dentu.
19 *Sur une blastomycose intra-péritonéale. R. Blanchard.
20 *Present Status of Operation for Ptosis by Substitution of the Superior Rectus. Motais.—Etat actuel de la méthode opératoire du Ptosis par la suppléance du muscle droit supérieur.

21 Hygiène de l'enfance. Committee Report and Discussion.
22 (No. 13.) Le rachitisme considéré comme maladie de dégénérescence. Hérédité du rachitisme. La famille rachitique. V. Galippe and Mayet.
23 *Maladies épidémiques et contagieuses qui ont régné dans les colonies françaises au cours de l'année 1901. Kermorgant.
24 *Discussion sur la maladie de Paget et la syphilis héréditaire tardive.

17. **Guaiacolated Camphorated Oil in Incipient Infections.**—More than 150 soldiers have been treated by subcutaneous injection of 2 gm. of the mixture described. It proved an excellent measure in the extreme depression accompanying incipient grippe, follicular tonsillitis, bronchitis, etc. The injections display a marked and durable antipyretic action. They are particularly valuable in the army to combat the extreme lassitude observed among the men at certain seasons and among the new recruits. The formula used is guaiacol .1 gm. to .5 gm. camphor and 15 gm. olive oil.

18. **Segregation of Urine.**—Le Dentu states that Luys' segregator has been used now on 45 men and 55 women, and with perfect success. A small model has also proved successful on a boy and a girl. Lambotte of Brussels suggested, in 1890, the idea of such an instrument for intravesical segregation of the urine, but his device for the purpose was not practical, and Luys, without knowledge of it, invented his instrument which has been previously described in these columns, followed seven months later by Cathelin's segregator. The principle is the dividing of the floor of the bladder into two compartments, and thus differs from the instruments devised by Harris and Downes on Neumann's suggestion.

19. **Intraperitoneal Blastomycosis.**—Blanchard's patient was a young mechanic, who had noticed a feeling of oppression in the right side of the abdomen for two months, with constipation and painful indigestion, loss of appetite and considerable emaciation. As he lay on his back, the abdomen above the umbilicus protruded and palpation revealed a fluctuating mass, filling the right half of the abdomen, and especially the iliac fossa. McBurney's point was slightly painful. The skin appeared normal, the veins were not swollen. The presumptive diagnosis was tuberculous peritonitis and appendicitis. The peritoneal cavity and iliac fossa contained a large quantity of a whitish yellow, gelatinous substance in which the appendix and cecum were floating. The former was resected and the jelly removed as thoroughly as possible and the cavity drained. The patient rapidly recuperated and is in perfect health, with no signs of recurrence, more than a year since the intervention. The substance removed was not at all of a neoplastic nature, and the organism had no share in its production except by serous exudation. It consisted of an amorphous fundamental substance containing spherical cells and filaments of a blastomyces pathogenic for laboratory animals, but to date it has not reproduced a jelly pseudotumor like the mass from which it is derived. Strange to say, the organism adapts itself without reaction to the presence and proliferation of this parasite, although the resulting mass compresses and modifies the relations between the elements. There is no zone of irritation, no phagocytosis and no giant cells. This absence of irritation seems to indicate that the blastomyces generates a toxin which paralyzes the leucocytes in the vicinity. The fact of the existence of such a toxin is confirmed by the intense fatty degeneration of the liver and the emaciation of the animals inoculated. The patient himself was also much emaciated. The details of culture growth, etc., are reviewed and the complete illustrated description will soon be published in the "Archives de Parasitologie."

20. **Motais' Operation for Ptosis.**—Since Motais first described, in 1897, his method of treating ptosis by substitution of the superior rectus a large number of ophthalmologists have performed the operation. Some have modified it slightly, but none essentially, and the method can now be considered as firmly established, he states, as the method of operating on strabismus. He shows the physiologic condition and the various points of the intervention in 11 cuts. The movement communicated to the lid by the graft of the superior rectus reproduces exactly the physiologic action of the levator palpebræ. The conditions, therefore, are perfect as regards the esthetic outcome. There is a possibility of two complications, vertical diplopia and ulcer of the cornea. The latter can be avoided and the former is not constant. When it occurred it became gradually attenuated, disappearing completely in fifteen days to five months in all the cases on record. The first step in the operation is to draw the ball down and lid up until the superior cul-de-sac is completely smoothed out and forms a flat surface. The conjunctiva is then incised horizontally about 5 to 6 mm. from the cornea, for a distance of 12 to 15 mm. From the center of this horizontal incision a perpendicular incision is carried upward to the edge of the tarsus. The tendinous expansion of the superior rectus is then exposed through the opening thus made and it is lifted up with a large hook. A buttonhole is cut in the tendon 3 mm. from its insertion in the sclerotic coat, and from this buttonhole two parallel incisions are made for 10 mm. lengthwise of the tendon, thus cutting out of its center a long narrow flap, while not disturbing its attachment to the eyeball. The tip of this flap is held in broad forceps to spread it to its fullest width and a thread is passed through it in a U stitch. The outer surface of the tarsus is then detached from surrounding tissues and the flap is drawn into the recess thus made, the needles on each end of the thread emerging on the outer or inner aspect of the lid as desired. The ends of the thread are tied over a roll of cotton or gauze. The flap is drawn nearer to the edge of the eyelid according as the ptosis is more pronounced. In the 32 operations by this method that have been published, ulcer of the cornea was observed in 5, but this could be attributed in every instance to irritation from the catgut knot of the suture or to direct irritation from the dressing. Motais now uses very soft silk, and has had no irritation in 10 cases in which he has tied the knot of the thread on the inner side of the lid.

23. **Epidemics, etc., in the French Colonies.**—We note, among the items in this official report, that an epidemic of bubonic plague among the natives in the northern part of New Caledonia abruptly ceased after four days of violent rains, "which completely swept the ground." The report states that leprosy is increasing at an alarming rate. During the last twenty-five years entire tribes on this and adjoining islands have been annihilated by it. French Guiana, New Caledonia and points in Oceania are particularly dangerous on this account for Europeans. New cases of leprosy are frequently encountered among French officials returning from these colonies, unconscious that they have been infected. The incessant arrival of these new cases of leprosy is a menace to Paris and the country at large. In New Caledonia a fifth of all deaths is due to tuberculosis. The report comments on the lack of resistance to tuberculosis of the natives of Oceania, notwithstanding their stature and athletic forms. Young men built like a Hercules succumb in a few months to phthisis.

24. **Paget's Disease and Tardy Hereditary Syphilis.**—Fournier replies to Lannelongue's communication asserting the heredosyphilitic nature of Paget's disease. His experience has not been conclusive, but he is inclined to consider it a parasyphilitic affection, like tabes, general paralysis, pigmented syphilid of the neck, leucoplasia and tabic exostosis, which, although largely dependent on syphilis, are yet not influenced by antisypilitic medication. He also discusses the question whether a heredosyphilitic should be informed of his condition, and takes a decided affirmative stand. If young, the parents must be warned, in order that the child may have suitable treatment and that the specific nature of possible lesions may be recognized in time. If the subjects are of riper years, he informs them that they have syphilis, but does not consider it his business to tell them whence they derived it. The source is a secondary matter. The main point for the physician is that the subject has syphilis and must be on his or her guard against its manifestations. The question of marriage for heredosyphilitics imposes the necessity that they should know their condition. He describes several cases to illustrate this point. Robin continued the discussion, reporting some

research on the composition of the bones in syphilitics and in Paget's disease. A syphilitic tibia contains more water and more nitrogenized substances than the Paget tibia, with less fats, while the mineral elements are about the same. The fatty matters in the syphilitic tibias averaged .176, while the Paget tibia showed 13.19, and the other sound tibia of the same subject showed 11.2.

Presse Medicale, Paris.

25 (No. 21.) Campaign Against Tuberculosis. M. Letulle.—La lutte contre la tuberculose et l'anarchie médicale.
26 L'extirpation de l'esophage thoracique. J. L. Faure.
27 (No. 22.) Valeur clinique de l'examen cytoscopique des urines. L. Bernard.
28 L'arrhénal dans le traitement des Fièvres palustres à Tananarive. M. Fontoynont.
29 (No. 23.) Angiocholite chronique et insuffisance hépatique avec symptomes d'acromégalie. Klippel and Vigouroux. One case.
30 L'alcool. H. Labbé.
31 Treatment of First Permanent Molar. G. Mahé.—Conduite à tenir a l'égard de la dent de 6 ans.
32 (No. 24.) Les injections mercurielles intra-musculaires dans la syphilis. F. Tremolières.
33 Bactériologie et histologie urinaires. Technique microscopique et clinique. G. Borne and P. Vadam.
34 *Anesthesia of Inflamed Tissues with a Mixture of Cocain and Adrenalin. E. Foisy.—Nouveau procédé d'anesthésie des tissus enflammés.
35 Mutual Benefit Societies and the Campaign Against Tuberculosis. A. Calmette.—Les sociétés de secours mutuels et la lutte contre la tuberculose.
36 (No. 26.) *Cryoscopy of Milk. E. Parmentier.—La cryoscopie du lait.
37 A propos de la phlébalgie. E. Censier.
38 Rhinoplastic Restoration of Sub-Septum of Nose. A. Raoult.—Nouveau procédé de rhinaplastie partielle pour la restauration de la sous-cloison nasale.
39 (No. 27.) *La tuberculose. Maladie sociale. L. Landouzy.
40 *Adrenalin in Treatment of Cancer. G. Mahu.—L'adrénaline. Remède du cancer.
41 Improved Keratin Coating for Pills. H. Dumont.—La médication keratinisée.

34. **Cocain-Adrenalin Anesthesia of Inflamed Tissues.**—Foisy proclaims that this method of local anesthesia is far superior to all others, as it suppresses both pain and hemorrhage. He has removed with it large carbuncles on the neck and suppurated ganglia in the inguinal region and operated on anal fistulas without pain. He uses a mixture of 20 to 25 c.c. of a 1/200 solution of cocain, with 13 to 15 drops of a 1/1000 solution of adrenalin. In case a smaller amount of a more concentrated solution is preferable, his formula is 1 c.c. of a 1 per cent. solution of cocain with 4 or 5 drops of a 1/1000 solution of adrenalin. The patient reclines and the injection is made along the line of the proposed incision. The needle is then introduced deeper into the tissues, using three or four syringefuls in all of the first mixture. The first prick of the needle is all that the subject perceives. Anesthesia is complete in two or three minutes, but exaggerated pressure or traction on the tissues should be avoided, and the incision must be made through each layer separately. Every vessel oozing even very slightly must be ligated to prevent secondary hemorrhage as the effect of the adrenalin wears off.

36. **Cryoscopy of Milk.**—Parmentier's first communication on the importance and value of cryoscopy as a means of detecting the watering of milk was reviewed in these columns, p. 1032. He gives his experiences in this article and portrays the benefit derived from this simple method of controlling the purity of the milk. In one case two children were suddenly affected with a gastrointestinal trouble traced to the milk, which had a freezing point of .64 C., showing the addition of some foreign substance, found to be an irritating alkali used to clean the cans. In another case an infant was several times affected with enteritis, and the freezing point of the milk was .48 C., which indicated 12.72 per cent. of water. By this means he detected that the milk in certain hospitals was being watered in a proportion of 7, 12, 25 and even 34 per cent., but since the dealers know that the cryoscopy test is being applied the milk has been pure. There is no doubt that many small epidemics among children are caused by impure water being used to adulterate the milk. Some of the crèches were found to be distributing milk containing 12 per cent. water. This may explain many cases of gastroenteritis among infants, and possibly is responsible for the high infantile mortality, especially in summer. He found that the higher-priced milk was as liable to be watered as that sold at ordinary rates. The dealers aim to produce a milk so rich that it supports all the usual tests while still containing a large proportion of water, which hitherto has escaped ready detection. The normal freezing point of normal milk is minus .55 or .56 C. When it is .53 it indicates a proportion of water of 3.63 per cent.; .52 indicates 5.45 per cent.; .51 indicates 7.27; .50 indicates 9.09; .49 indicates 10.90; .48 indicates 12.72; .44 indicates 20 per cent.; .40 indicates 27.27 per cent., and .36 indicates 34.54 per cent. The formula for the calculation is that the water added is equal to the amount of milk multiplied by the quotient of the normal freezing point minus the freezing point observed, divided by the normal freezing point. If the freezing point is above .57 C. foreign substances must have been added, generally sodium borate or bicarbonate.

39. **Tuberculosis from the Social Point of View.**—In this address Landouzy arraigns the armed peace of Europe as one of the most prolific sources of the spread of tuberculosis. He states that during the last eight years alone France has lost 36,000 young soldiers on account of tuberculosis, either by death or dismissal from the service. They may have brought the germs of disease with them into the army, but under more favorable conditions the germs might not have developed. He urges the instruction of girls in the prophylaxis of disease and in hygiene, remarking "that every time a woman is trained a little school is founded." Young mothers thus instructed will guard their babes from intercourse with coughers and from their kisses. They will bring the sun into their homes and abolish dust and dry sweeping. Alcohol makes the bed for tuberculosis. Lancereaux found 1,229 alcoholics among 2,000 consumptives. In the manufacturing centers in the department of the Rhone and of the Seine, tuberculosis claims 255 out of every 1,000 deaths. The proportion of deaths from tuberculosis is 50 per 10,000 inhabitants in the crowded portions of Paris, while it is only 20 in the wealthier parts of the city, as in the Madeleine, and 11 in the Champs Elysées, where the very rich reside. In conclusion, he urges that all the various anti-tuberculosis and anti-alcohol societies, leagues, etc., should be co-ordinated into one grand federation to include every organization working for sanitary and social improvement. Such a combination for the purpose of stamping out tuberculosis, the social evil of our epoch, would be the most exalted expression of the ideas of mutual co-operation and fellowship which ought to govern modern society.

40. **Adrenalin for Cancer.**—Mahu has found that it is possible to arrest the pain and hemorrhage and thus improve the general health, by merely swabbing the ulcerated surface of a cancer with a 1 per 1,000 solution of adrenalin. He describes 3 cases thus treated. It is, of course, only a palliative measure, but in every instance the benefit derived was most remarkable. The neoplasms partially retrogressed and then remained stationary, free from pain or hemorrhage, the patients apparently in robust health. On 4 others the results were nearly as good. The cancers were in the mouth, throat, breast, rectum, or on the face.

Semaine Medicale, Paris.

42 (XXIII, 13.) The Unconsciously Deaf. E. Félix.—Les sourds inconscients.
43 Letter from America (Chicago). La fièvre typhoide aux Etats Unis. F. Münch.
44 (No. 14.) *Valeur pratique de la suture arterielle. F. Lejars.
45 Letter from America (Chicago). La radiothérapie à Chicago. F. Münch.

44. **Suture of Arteries.**—Lejars has found in the literature 23 cases in which an artery was sutured lengthwise, and 4 in which a circular suture was made. The axillary was sutured in 7, the femoral in 6, the popliteal in 3, the common iliac, external iliac, common carotid and internal carotid in 1 each. In a certain number the results were perfect, both immediate and afterward. Even in 7 cases in which the sutures passed through into the lumen, there was no thrombosis or obliteration. This was especially noticeable in experiments on animals, even when a piece of catgut traversed the lumen. Thrombosis is directly connected with infection; when the surroundings were aseptic success was almost invariable. When there is

They confirm those published by Bra, Marchand, von Leyden Blumenthal and others, with organ and serum treatment of cancer.

81. **Stomach-Spleen Reflex.**—Hnatek reports comprehensive experimental study of the phenomenon that the spleen increases in size on chemical, thermic or mechanical irritation of the stomach. He found that the phenomenon occurred after the vagus was severed and that it is a reflex by way of the sympathetic. He also established that it was not due to congestion in the veins of the spleen.

84. **Pathology of the Prostate.**—Remete publishes an account of 2 cases of atrophy of the side of the prostate corresponding to resection of the testicle, twenty-two and nine years before, for trauma or sarcoma of the penis. He proclaims that we can expect atrophy after castration only when the prostate is comparatively normal. After it is once pathologic or degenerated it is no longer capable of a process of involution and, consequently, castration is powerless to effect it.

87. **Improved Roentgen Technic.**—Wiesner makes the exposures through a round hole in the center of a lead-coated board. A metal cylinder is fastened in the hole in the center and can be raised or lowered by a screw. The board is also adjustable on a standard which also carries the vacuum tube above. As the subject reclines, the board is lowered to fit over the part to be radiographed and the metal cylinder is pressed down into the skin, and the radiograph taken through it. By this means only the parallel rays are admitted and no radiation occurs. The pictures are much clearer than those otherwise obtained. It is possible to obtain in this way the most instructive radiograms of the sacrum and spine, even in corpulent persons, in two minutes. The contrivance is illustrated.

93. **Treatment of External Anthrax.**—Graef states that in 62 out of 75 cases of serious external anthrax he was able to transform the threatening lesion into an innocent scab in less than twenty-four hours. Ten of the remainder finally recovered, and 3 died. This percentage of deaths is small in comparison to the statistics published by others, and he attributes his success to his method of treatment. This consists in cauterizing the lesion with caustic potash. He first cuts out the necrotic plug in the center, but carefully refrains from excising into sound tissue, and then uses the caustic pencil.

Riforma Medica, Palermo.

Last indexed page 945.

94 (XIX, 1.) Percussion of Heart from Rear. L. Ferranini and G. Arnone.—L'ottusita posteriore del cuore in condizioni normali e patologiche.
95 *L'uso del cacodilato di sodio in alcune dermatosi. G. Pabis.
96 Sull' isterotomie vaginale. B. Nigrisoti.
97 Sepsis of Air Passages in Early Infancy. E. Mensi.—Sulla sepsi dell'apparato respiratorio nella prima infanzia.
98 (No. 5.) Contributo alla patogenesi della tetania gastrica. L. D'Amato.
99 Le indicazioni degli interventi chirurgici nelle malattie degli intestini. R. T. Giovanni.
100 *Sulle ippuropatie (lesioni della cauda equina) e sull' innervazio radicolare. S. Pansini. (Commenced in No. 1.)
101 *New Method of Hysteropexy. G. Foschini.—Nuovo processo di isteropessia a cura delle retrodeviazioni e dei prolassi. G. Foschini.

95. **Sodium Cacodylate in Dermatoses.**—Pabis found this drug effective in improving the general nutrition in cases of eczema, ichthyosis, prurigo and lupus and thus indirectly benefiting the dermatosis.

98. **Gastric Tetany.**—D'Amato reports a case of acute and fatal gastric tetany occurring in a robust man of 32, who for five years had suffered from gastrectasia, the results of stenosis of the pylorus, with hyperchlorhydria. Guinea-pigs were injected with a filtrate of the stomach contents after a test meal, obtained by the stomach pump during the last days of life, as lavage was resorted to as a palliative measure. The 21 animals all died with symptoms closely resembling those of the tetany observed in the patient. The query then arose as to whether the convulsions observed were due to some special toxin in the tetanic stomach or merely to the hyperchlorhydria. Further experiments were made with other animals injected with the filtrate of the stomach contents from a patient with pronounced Reichmann's disease, but no pathologic results were noted in these animals, not the slightest tendency to tetany. He concludes, therefore, that the convulsive toxin found in the stomach of the patient with tetany was a specific, transient toxicity connected with the tetany. The other organs at the autopsy showed also evidences of the action of some toxin.

100. **Lesions of the Cauda Equina and the Radicular Innervation.**—Pansini concludes his extensive monograph on this subject with the statement that everything points to the fact that the terminal peripheral nerve distribution corresponds to the metameres. The plexuses and the peripheral nerves all follow the distribution of the roots, but superposed and intertwined to ensure the multiplicity of innervation of every point at the periphery.

101. **Foschini's Method of Hysteropexy.**—The round ligament is drawn up through a buttonhole on each side, about 3 cm. outside of the inner edge of the rectus. The loop of the ligament is then cut and the two ends sutured to the aponeurosis. He has found this procedure a most effective means of correcting prolapse and retrodisplacement, while it is simple and easy of execution and does not interfere in the least with future pregnancies, as he has several times had occasion to observe. It also holds the adnexa and prevents their displacement, which Pozzi considers as the most important factor in the production of the disturbance accompanying displacement of the uterus.

Hygiea, Stockholm.

Last indexed page 683.

102 (No. 1.) *Nervous Heart Affections. J. G. Edgren.—Om de s. k. nervösa hjärtsjukdomarna.
103 Preparation of Yeast for Medicinal Use. A. Blomqvist.—Om Jästpreparat (Saccharomycetes sicc. pulv. 1 : 1 m. fl.) for medicinska ändamål.
104 *En ny metod för operation af entropion senile. G. Ekehorn.
105 Notes from Foreign Lands. S. Lysander.—Räknekort vid epidemiska sjukdomar (Hamburg).—Kyrkogarden i Hamburg.—Gatubeläggning med trä i Paris.—Le musée social i Paris.
106 Three Cases of Cancer of Liver. E. Rodhe.—3 fall af primar lefverkancer.
107 (No. 2.) Model Tuberculosis Pavillion at Stockholm General Hospital. F. W. Warfvinge.—Nagro ord am tuberkulos och om tuberkulospaviljonge vid Sabbatsberg sjukhus.
108 *Addison's Disease in Sweden: Carcinoma in Lung, Etc. A. Josefson.—Sällsyntare sjukdomsfall.
109 Combined Night Lamp and Nursing Bottle Warmer. J. Rodling. *Kombinerad nattlampa och snabbvärmare for diflaskor.*
110 (No. 3.) *Fall af hernia obturatoria. Nils Hellstrom.
111 *"Ether Drunk." J. Landström.—Om eterrus.
112 Kolpohysterostomi vid inkarcerad gravid uterus. G. Wennerström
113 *How Can the Dangers to Society of the Pregnancy of a Syphilitic Woman Be Averted? E. Welander.—Till fragen: huru kunna hämma den sociala fara som et syfilitiskt hafvandeskap kan medföra?
114 Warning Circular for Prophylaxis of Venereal Diseases. Ibid.—Nagra ord om sattet att upplysa allmanheteb angaende de veneriska sjukdomarnas stora sociala betydelse.
115 History of Modern Treatment of Wounds. G. Naumann.—Den moderna sarbehandlingens, etc.

102. **Nervous Heart Affections.**—Edgren reviews his extensive experience with essential or paroxysmal tachycardia, true angina pectoris and other heart diseases, seeking to formulate a base for differentiation of the merely nervous angina pectoris. The latter he finds occurs usually in younger subjects, although he has exceptionally observed it in persons over 60. The attacks do not follow physical exercise, but are rather relieved by it. They seldom occur at night; are more protracted than true angina pectoris. The subjects complain of their sufferings, throw their arms around, move about restlessly, and appeal to the sympathy of people around. The pains are ascribed to the heart region, but spread around it for quite a distance. In true angina, on the other hand, the pains are more circumscribed and radiate in determined directions, to the left axilla, arm, hand, neck and head. The subject stands immovable and grasps some support, without uttering a word. The oppression in the chest, sensation of constriction around the neck and fear of impending death overshadow the actual pain experienced. The attacks also are brief. In the nervous form periods of tachycardia are liable to alternate with normal heart action. The latter is influenced by slight causes, the physician's examination, change of position, etc., may send the pulse up 20 to 30 beats a minute. A blowing sound is often noted in nervous heart affections, usually systolic, but occasionally diastolic, the maximum over the pulmonic valves. It is brief and

variable. A nervous heart affection may accompany an organic lesion in some other organ. The discovery of other nervous symptoms, neurasthenia or hysteria, will aid in the diagnosis. The objective signs of a nervous heart affection include tachycardia or less frequently bradycardia, "palpitations," a slight degree of arrhythmia, accentuation or reduplication of the heart sounds, and the above-mentioned blowing sound. All these symptoms are variable, some noted at one time and some at another. If constant, they indicate an organic lesion. If the heart is found to be hypertrophied, the case can not be one of purely nervous origin and requires different treatment, as also valvular affections, etc., bearing in mind that it is possible for a mitral stenosis to occur without the usual signs for a time. It is sometimes a difficult matter to exclude sclerotic alterations, especially in case of an old syphilitic, and also slight degrees of cardiac insufficiency. Dyspnea is an important symptom. In nervous heart affections the inciting cause is not physical exercise as in the physiologic and organic pathologic conditions, but is the result of some emotion or nervous disturbance. Treatment should commence with the most careful, repeated physical examination, even when the physician is convinced of the nervous nature of the trouble. The patient should at once be told that the findings are negative and this alone will aid the cure. Therapeutic measures must harmonize with the statement, to ensure the confidence of the patient which prescribing of digitalis, for instance, would have a tendency to undermine. The principal reliance is on dietetic and hygienic measures; a sedentary mode of life must be changed and the fanatic sportsman restrained. Some of the patients suffer from inanition, not from poverty, but from improperly prepared food, irregular meals, etc. Others, on the contrary, indulge too freely in the pleasures of the table. It is important, however, not to attempt to reduce obesity too rapidly or the nervous symptoms may become aggravated to an alarming degree. Treatment of concomitant gastrointestinal or genital affections, chlorosis and anemia is naturally of great importance. Purely medicinal treatment is of subordinate importance. The bromids and other nervines have merely a transient effect. As important adjuvants, mineral waters and baths, gymnastics, massage and, possibly, electricity will be found useful, as also other measures beneficial for neurasthenia.

104. **Operation for Senile Entropion.**—The lids are left untouched and a crescent-shaped piece cut out of the conjunctiva, about as long as the tarsus, and in the middle about as wide or slightly wider than the latter. The wound is then sutured. Ekehorn has successfully performed this operation, the details of which are illustrated, on both eyes of one patient. The entropion dated from about a year previously. The eye appeared normal afterward and showed no traces of having been operated on unless examined closely. Judging from the results in this case recurrence seems to be impossible.

108. **Addison's Disease in Sweden; Carcinoma in Lung, Etc.**—The clinical records and pathologic anatomic findings are described in detail of a successfully diagnosed case of stenosis of the isthmus of the aorta and of 4 cases of primary carcinoma of lung. Josefson also cites 7 cases of Addison's disease that have been published in Sweden and 3 personally observed. One of the latter was distinguished by hyperglobulia. Recent articles on Addison's disease have ignored the contributions of Swedish writers, which now include a total of 10 cases. The age ranged from 24 to 50 and 7 of the patients were men. The autopsy findings are given in his cases.

110. **Incarcerated Obturator Hernia.**—Hellstrom has collected 37 cases of this rare form of hernia and gives the particulars in tabulated form. Death occurred in all but 12. All are from the European literature except Elder's case in the Annals of Surgery, 1900. He describes a case personally observed. The patient was a woman of 67 who had noticed a small tumor for twelve years at the obturator foramen. The hernia was readily reduced at first, but finally caused pains extending down toward the knee and symptoms of incarceration. Complete recovery followed a radical operation by Borelius. In the collected statistics, as in this case, there was a coincidence of some other hernia with the obturator in 4 cases, and in one there was bilateral obturator with bilateral femoral hernia, and in another five hernias at once. The neuralgic pain extending down to the knee was denied in 6 and not mentioned in 8, but was noted in the others. The age ranged from 38 to 84. Sprengel's patient was 80 and recovered after a laparotomy.

111. **"Ether Drunk."**—Sudeck called attention in 1901 to the possibility of operating during the first phase of unconsciousness caused by the fumes of ether. Landström reports that more than 100 operations have been performed at the Stockholm hospital with this anesthesia alone, using merely 10 to 20 c.c. of ether and operating as soon as this has been inhaled in a few deep breaths. In some cases 5 c.c. were sufficient. The operations were mostly short, painful ones, but in one instance a Gritti amputation of the thigh was done, and the patient was kept under the influence of the ether with merely 70 c.c. for thirty-two minutes, giving a few drops the fifth, ninth, eighteenth and twenty-fourth minutes. There is no danger of syncope or unfavorable action on the respiratory organs. Lennander, Ehrlich and von Bruns also report very favorable results with the "Ether Rausch," alone or in combination with local anesthesia, and by repeating it several times in succession have been able to do long operations with it.

113. **To Minimize Dangers from Pregnancy in a Syphilitic.**—Among the measures which Welander advises are the thorough mercurial treatment of the women, preferably by his "pillow case" method. The children should be brought up if possible under medical supervision in a special asylum for three or four years at least. He has organized such an asylum which has accommodations for 10 or 12 children. Eight of the mothers were under treatment at the general hospital before the termination of the pregnancy. None of their children exhibited symptoms of syphilis at birth or since. The other children were marked with hereditary syphilis when admitted to the asylum. All of the children are treated intermittently with the mercurial "pillow-cases." The little asylum has prevented the contagion of others, while it offers the children the very best chances for minimizing their evil inheritance.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Practical Points in Nursing. For Nurses in Private Practice. With an Appendix Containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages; Weights and Measures; Dose List; and a Full Glossary of Medical Terms and Nursing Treatment. By Emily A. M. Stoney, Late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Third Edition, Thoroughly Revised. Fully Illustrated, Including 8 Colored and Half-Tone Plates. Cloth. Pp. 458. Price, $1.75 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

The Practitioner's Guide. By J. Walter Carr, M.D. (Lond.), F.R.C.P., Physician Royal Free Hospital; T. Pickering Pick, F.R.C.S., Consulting Surgeon, St. George's Hospital and Victorian Hospital for Children; Alban H. G. Doran, F.R.C.S., Surgeon to the Samaritan Free Hospital; Andrew Duncan, M.D., B.S. (Lond.), F.R.C.S., M.R.C.P., Physician Branch Hospital Seamen's Hospital Society. Cloth. Pp. 1107. Price, $6.00. New York, London and Bombay: Longmans, Green & Co. 1902.

Handbook of Climatology. By Dr. Julius Hann, Professor of Cosmical Physics in the University of Vienna. Part I—General Climatology. Translated, with the Author's Permission, from the Second Revised and Enlarged German Edition, with Additional References and Notes, by Robert DeCourcy Ward, Assistant Professor of Climatology in Harvard University. Cloth. Pp. 437. Price, $3.00 net. New York: The Macmillan Co. 1903.

The Care of the Baby. A Manual for Mothers and Nurses, Containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Third Edition, Thoroughly Revised. Cloth. Pp. 436. Price, $1.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A Text-Book of Legal Medicine and Toxicology. Edited by Frederick Peterson, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, in Affiliation with the University of Chicago. Cloth. Pp. 750. Price, $5.00. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

Medical Jurisprudence, Insanity, and Toxicology. By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third Edition, Thoroughly Revised, Greatly Enlarged, and Entirely Reset.

Fully Illustrated, Including Four Colored Plates. Cloth. Pp. 329. Price, $1.75 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

Success in Dental Practice. A Few Suggestions Relative to the Most Approved Methods of Conducting a Practice. By. C. N. Johnson, M.A., L.D.S., D.D.S., Professor of Operative Dentistry in the Chicago College of Dental Surgery. Cloth. Pp. 159. Price, $1.25. Philadelphia and London: J. B. Lippincott Co. 1903.

Tuberculosis: Recast from Lectures Delivered at Rush Medical College, in Affiliation with the University of Chicago. By Norman Bridge, A.M., M.D., Emeritus Professor of Medicine in Rush Medical College. Cloth. Pp. 302. Price, $1.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

Transactions of the Fourteenth Semi-Annual Meeting of the Medical Society of the Missouri Valley, at Lincoln, Neb., March 20, 1902. Paper. Pp. 47. St. Joseph, Mo.: The Medical Herald. 1902.

Transactions of the Luzerne County Medical Society, for the Year Ending December 31, 1902. Volume X. Paper. Pp. 162. Wilkesbarre, Pa.: The E. B. Yordy Co. 1903.

Twenty-first Annual Report of the Board of Health of the City of Lowell, for the Year 1902. Paper. Pp. 67. Lowell, Mass.: Courier-Citizen Co. 1903.

The Public Service.

Army Changes.

Movements of officers of the Medical Department, U. S. A., under orders from the Adjutant-General's Office, Washington, D. C., from April 10 to 17, 1903:

Devereux, John R., first lieut. and asst.-surgeon, is directed to proceed to Fort Snelling, Minn., for duty, instead of Fort Columbus, as heretofore ordered.

Gilchrist, Harry L., first lieut. and asst.-surgeon, will proceed to Philadelphia, Pa., and New York City on business pertaining to the medical department of the Army.

Kennedy, James M., captain and asst.-surgeon, having completed the duty for which he was ordered to Washington, D. C., will, on the expiration of his present leave, proceed to Allentown, Pa., New York City, Boston, West Point, N. Y., Buffalo, N. Y., Cleveland, Ohio, Chicago and St. Louis, on business pertaining to the medical department of the Army, and on the completion of this duty will rejoin his proper station at the Presidio.

Miller, Edward W., contract surgeon, will report to the commanding officer, 14th battalion, field artillery, in camp at the Presidio, for duty therewith en route to Fort Sheridan, and on the completion of this duty, will proceed to his home, Chicago, for annulment of contract.

The following named medical officers are detailed to represent the medical department of the Army at the annual meeting of the American Medical Association to be held in New Orleans, from May 5 to 8, 1903: Major Louis A. LaGarde, surgeon; Major Charles F. Mason, surgeon; First Lieut. James Carroll, asst.-surgeon.

The following named officers are detailed to represent the medical department of the Army at the Interstate National Guard Association, to be held at Columbus, Ohio, May 4 to 6, 1903: Captain Merritte W. Ireland, asst.-surgeon, Captain Frederick P. Reynolds, asst.-surgeon.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending April 25:

Medical Director T. H. Streets, detached from the Naval Laboratory, New York, and to duty at the Naval Hospital, Philadelphia.

Medical Inspector G. R. H. Harmon, ordered to the Naval Laboratory, New York.

Asst.-Surgeon J. Stepp, ordered to the Naval Hospital, Portsmouth, N. H.

Medical Director J. B. Parker, detached from the Naval Hospital, Philadelphia, and ordered home to wait orders.

P. A. Surgeon H. H. Haas, detached from the Naval Hospital, Portsmouth, N. H., and granted sick leave for four months.

Surgeon J. D. Gatewood, detached from the *Lancaster* and ordered to the *Yankee*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 23, 1903:

P. A. Surgeon A. C. Smith, leave of absence for 15 days from April 8, 1903, granted by bureau letter of March 25, 1903, amended so that it shall be for 10 days only.

P. A. Surgeon J. A. Nydegger, relieved from duty at Baltimore, and directed to proceed to Gulf Quarantine and assume command of the service at that port.

P. A. Surgeon L. L. Lumsden, to proceed to New Orleans, and report to medical officer in command for duty and assignment to quarters.

P. A. Surgeon J. F. Anderson, to proceed to Great Falls, Mont., for special temporary duty.

Asst.-Surgeon J. W. Kerr, to proceed to Gallipolis, Ohio, and Point Pleasant, W. Va., for special temporary duty.

Asst.-Surgeon T. F. Richardson, to proceed to Bay St. Louis, Pascagoula, Pass Christian, Long Beach, Handsboro, Gulfport, Biloxi, Ocean Springs and Scranton, Miss., for special temporary duty.

Asst.-Surgeon Jos. Goldberger, relieved from duty at Ponce, P. R., and directed to proceed to Vera Cruz, Mex., for duty in office of the U. S. Consul.

Asst.-Surgeon Edward Francis, to report to director of hygienic laboratory for special instructions.

A. A. Surgeon, D. M. Echemendia, granted leave of absence for seven days from April 15, under provisions of Paragraph 210 of the regulations.

A. A. Surgeon John Frick, relieved from duty at Havana, Cuba, and directed to proceed to Tampico, Mex., for duty in office of U. S. Consul.

A. A. Surgeon B. W. Goldsborough, granted leave of absence for 3 days from April 28.

A. A. Surgeon W. C. Mason, granted leave of absence for 3 days from May 5.

A. A. Surgeon M. V. Safford, granted leave of absence for 2 days from April 10, under provisions of Paragraph 210 of the regulations.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 25, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, April 11-18, 3 cases.

California: San Francisco, April 5-12, 15 cases.

Colorado: Denver, April 4-11, 28 cases.

Florida: Jacksonville, April 11-18, 1 case.

Illinois: April 11-18, Belleville, 3 cases; Chicago, 17 cases, 2 deaths; Galesburg, 4 cases.

Indiana: April 11-18, Evansville, 3 cases; Indianapolis, 4 cases, 2 deaths.

Kentucky: Covington, Jan. 10-April 18, 98 cases.

Louisiana: New Orleans, April 11-18, 8 cases (imported).

Maryland: Baltimore, April 11-18, 2 cases.

Massachusetts: April 11-18, Fall River, 1 case; Lowell, 2 cases.

Michigan: April 11-18, Detroit, 11 cases; Flint, 1 case; Grand Rapids, 7 cases; Port Huron, 1 case.

Minnesota: Winona, April 11-18, 1 case.

Mississippi: Gulf Port, April 16, 16 cases.

Missouri: St. Louis, April 12-19, 9 cases.

Nebraska: Omaha, April 11-18, 2 cases.

New Hampshire: April 11-18, Manchester, 8 cases; Nashua, 5 cases.

New York: Buffalo, April 11-18, 2 cases, 1 death; New York, April 11-18, 2 cases, 1 death; Rochester, April 14-21, 4 cases.

Ohio: Cincinnati, April 10-17, 15 cases, 1 death; Cleveland, April 11-18, 1 case, 1 death; Dayton, April 11-18, 2 cases; Toledo, April 4-18, 19 cases, 1 death.

Pennsylvania: April 11-18, Altoona, 1 case, 1 death; Johnstown, 1 case; Philadelphia, 10 cases, 1 death; Scranton, 8 cases.

South Carolina: Charleston, April 11-18, 5 cases; Greenville, April 4-11, 1 case.

Tennessee: Memphis, April 11-18, 1 case.

Utah: Salt Lake City, April 11-18, 3 cases.

Washington: Tacoma, April 6-13, 2 cases.

Wisconsin: Milwaukee, April 11-18, 1 case.

SMALLPOX—INSULAR.

Philippines: Manila, March 4-11, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, March 28-April 4, 8 cases.

Belgium: Brussels, March 28-April 4, 9 deaths.

Brazil: Bahia, March 21-28, 1 death; Rio de Janeiro, March 20-29, 13 deaths.

China: Hong Kong, Feb. 28-March 7, 1 case, 1 death; Shanghai, March 9-16, 12 deaths.

Colombia: Barranquilla, March 22-29, 1 death; Bocas del Toro, to April 6, 21 cases, 3 deaths.

France: Paris, March 28-April 4, 1 death.

Germany: Hamburg, March 28-April 4, 1 case.

Great Britain: Birmingham, March 22-April 4, 25 cases; Dublin, March 29-April 4, 12 cases, 1 death; Leeds, March 29-April 4, 10 cases; Leith, March 29-April 4, 2 cases; Liverpool, to April 4, 62 cases, 6 deaths; London, March 29-April 4, 13 cases; Manchester, March 29-April 4, 24 cases, 1 death; Sheffield, March 21-April 4, 4 cases.

India: Bombay, March 17-24, 85 deaths; Calcutta, March 14-21, 3 deaths; Karachi, March 16-22, 1 case, 1 death.

Italy: Milan, Feb. 1-28, 4 cases; Palermo, March 28-April 4, 1 case.

Japan: Yokohama, March 14-21, 1 case.

Mexico: City of Mexico, March 29-April 5, 8 cases, 6 deaths.

Russia: March 21-28, Moscow, 3 cases, 2 deaths; Warsaw, 7 deaths.

Straits Settlements: Singapore, Feb. 21-March 7, 2 deaths.

Turkey: Alexandretta, March 21-28, 6 cases.

YELLOW FEVER.

Brazil: Rio de Janeiro, March 13-20, 81 deaths.

Colombia: Panama, April 6-13, 3 cases, 1 death.

Costa Rica: Limon, April 10, 2 cases.

Ecuador: Guayaquil, March 21-April 4, 6 deaths.

PLAGUE—INSULAR.

Philippines: Manila, March 4-11, 10 cases, 8 deaths.

PLAGUE—FOREIGN.

China: Hong Kong, March 7-14, 19 cases, 17 deaths.

India: Bombay, March 17-24, 1,270 deaths; *Calcutta, March* 14-21, 751 deaths; Karachi, March 15-22, 120 cases, 97 deaths.

CHOLERA—INSULAR.

Philippines: Cebu, Feb. 21-28, 2 cases, 1 death; Manila, Feb. 21-28, 2 cases, 1 death; Opan, Island of Cebu, Feb. 28, 4 cases, 4 deaths; Talisay, Island of Cebu, Feb. 24, 17 cases, 10 deaths; Provinces, Feb. 1-28, 135 cases, 84 deaths; not previously reported, 532 cases, 319 deaths. Total, 667 cases, 403 deaths.

CHOLERA—FOREIGN.

India: Bombay, March 17-24, 1 death; Calcutta, March 14-21, 215 deaths.

Straits Settlements: Singapore, Feb. 21-March 7, 10 deaths.

Turkey: Damascus, to March 22, 28 cases, 28 deaths.

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Address.

A PLEA FOR EXPLORATORY OPERATIONS.

AIRMAN'S ADDRESS, DELIVERED BEFORE THE SECTION ON SURGERY AND ANATOMY AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT NEW ORLEANS, MAY 5-8, 1903.

JAMES E. MOORE, M.D.

MINNEAPOLIS.

One duty of the Chairman of this Section, as pre:ribed by our by-laws, is to open the exercises with a rief comment on some surgical topic or topics of live iterest.

During the past year no one subject has been of such aramount interest as to overshadow all the rest, but a teady and even rapid advancement has been made along ld lines, and an exceptional amount of preliminary 'ork or foundation laying has been done along new ines. More time and money have been expended in riginal research than in any previous year. The year as been made memorable by the permanent location in New York of a great laboratory for medical research, which has been placed in the hands of most eminent nen, and from which we have reason to expect reat results. The prevailing sentiment in the surgical vorld is one of wholesome conservative optimism.

Those of us who began the study of medicine before Koch made his immortal discovery of the tubercle bacilus can recall how hopelessly we endeavored to compreiend the term scrofula, that mantle of our ignorance vhich has happily disappeared, and how after this liscovery the clouds began to disappear like snow before he sunshine. Have we not much greater reason, by virtue of our laboratories of research, to hope for the liscovery of the cause of cancer in the near future?

Many of our medical colleges have established laboratories for the instruction of students in operations on animals, and these laboratories are being used more and more each year by practical surgeons in experimental work for the perfection of their technic and for original research. Every surgeon, no matter how much laboratory and experimental work he may have done, or how good a clinician he may be, will frequently meet cases in which conditions obtain within some one of the great cavities of the human body which are endangering the life or comfort of his patient, and which, after having exhausted all ordinary means of diagnosis, he can not diagnosticate. Under these conditions the surgeon should primarily, in the interest of his patient, and, secondarily, in his own interest, perform an exploratory operation. The mere fact that with our aseptic methods we can open the abdomen or the head with impunity gives us no license to make this a means of diagnosis until after all other methods have been exhausted. Nor does the fact that a man has learned to be reasonably certain of his asepsis entitle him to this privilege until after he is thoroughly familiar with both normal and pathologic conditions that he may find. I know of one instance, for example, in which a man opened an abdomen and was then unable to differentiate between the bladder and the sigmoid flexure, yet this patient did not die from sepsis. Such a man has no moral, and should have no legal, right to open an abdomen. This is simply an example of one of the dangers of asepsis.

This humble plea for exploratory operations is made with diffidence, for, "Fools rush in where angels fear to tread," and if this were an accepted method of diagnosis without most rigid restrictions, the ignorant and inexperienced would be the most ready to resort to it.

Owing to the brief time allotted for the reading of this address it will be limited to exploratory abdominal operations.

The term exploratory operation in this paper means a free opening made by the knife. The aspirator and the grooved needle no longer occupy a very prominent place as a means of diagnosis among surgeons, unless it is at the bottom of a wound. It is an open question whether these instruments have done more harm or good. Even the grooved director, which at one time occupied so important a place in a surgeon's armamentarium, has fallen into "innocuous desuetude."

We should no longer be content to divide our cases into operative and non-operative until after we have exercised the same care to form an accurate diagnosis that our colleague, the internist, would, and in addition, in doubtful cases, have made an exploratory incision, for some cases which from external examination would be pronounced inoperable prove on closer inspection to be operable, and in many cases in which a radical operation can not be performed a palliative operation may add somewhat to the patient's life and save him from a great amount of suffering.

It is in the abdomen that the exploratory operation is most frequently indicated, for in this region it is comparatively free from danger, and almost invariably results in some benefit to the patient. It is very rarely, indeed, that a good surgeon will make an exploratory abdominal incision without finding some condition which can be benefited.

At the beginning of abdominal surgery, which is within the recollection of many of those present, most operations were exploratory and were made for conditions in the pelvis, but at the present time, thanks to our accumulated experience and to the fact that in this region we can make bimanual examinations with one a country home away from the influence of smoke. In my opinion the grayish color was due to pathologic pigmentation and not to carbon inhaled. (This is often the case in most of gray sputa, many observers to the contrary notwithstanding.) He had been coughing six months and had lost twenty pounds and had had night sweats several weeks. His temperature had seldom risen above 101 2/5 F. in the afternoons; mornings it had often been subnormal. Being a case of clear tuberculosis, he was placed under the serum therapy as the specific basis of anti-tubercular treatment, and the various special phenomena of his malady were met as they appeared by such measures as were deemed best at the time. Nourishment and out-door air were of course insisted on. Neither creosote, guaiacol or inhalations were used. All these had been employed without good results for six months previously. Creosote and guaiacol seemed to have produced a severe form of dyspepsia, which yielded only to weekly lavage of the stomach. He steadily improved and got well in the course of eighteen months. He has shown no sign of illness for over four years. Infiltration seems to have disappeared absolutely. It would be difficult now, if not impossible, to find any lesion by any form of examination. Indeed, an insurance examiner of experience failed to find anything wrong in his chest.

The most significant features of this case are that it presented the evidence of pure pulmonary tuberculosis; that there never existed in the sputum any of the pathogenic germs that so frequently complicate tuberculosis; that the temperature seldom was higher than 101 2/5 F., and that the case recovered under the natural law measures indicated above, whereas he had been going down grade steadily and rapidly under the influence of the haphazard treatments which had been enforced before. This is one instance of several in my experience tending to show that pure tuberculosis is curable, often with comparative ease, by serum alone, provided such serum has been tested and is really effective. Such a product is not common on the market.

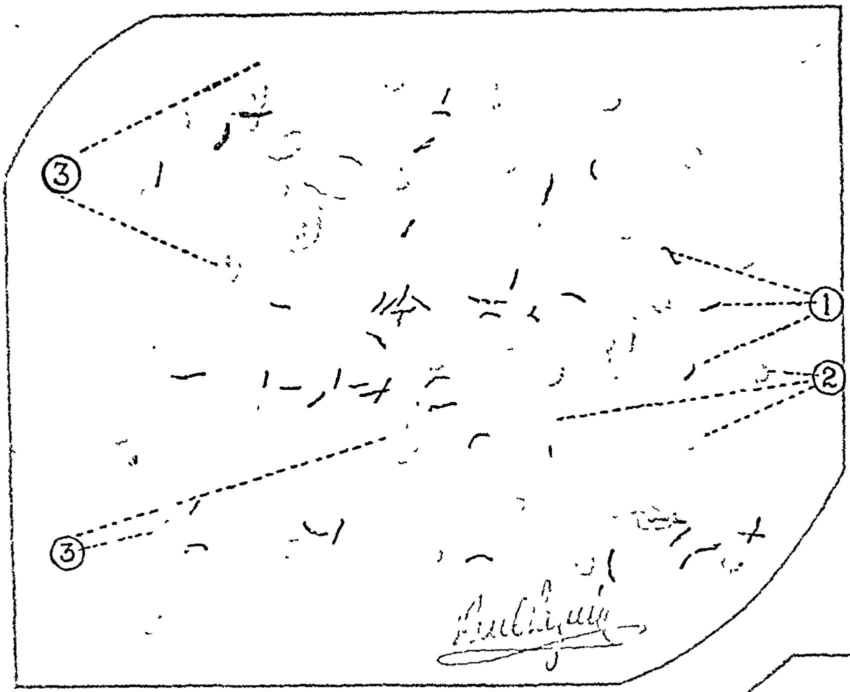
Contrast this case with the next two illustrated, viz.: pictures designated as Case 38 and Case C. The one marked No. 38 presents pus cells, bacilli of tuberculosis very few, and two forms of pus germs—the streptococci and staphylococci, each of them in small number. The sputum which contained these germs was gathered during the existence of an extensive area of more or less dense consolidation and involvement of lymphatic glands. All three of these classes of microbes are poison producers. Five weeks previous the patient had presented unmixed tuberculosis. He in the meantime contracted typhoid fever, and after his recovery from it the pus germs were present. Soon after small vomicæ were found. His temperature arose a few times as high as 103 F. at night, and there appeared occasionally night sweats and chills, but generally the highest point was 101 F. This was when the pus germs were few. The disease gained ground steadily in spite of all possible care, and the remedial measures applied included many remedies approved by authoritative teachers. Classic inhalations, which were begun at the first sign of softening, served seemingly to increase the irritation. Creosote injured the stomach and kidneys. Combined antiseptic and antitubercle sera were used without changing the situation. The strychnin tonics, iodin and sera, combined, and climate had a better effect, causing reinforcements which prolonged life three years. Here we had not higher fever than in pure tuberculosis, except when pus bacteria were numerous, and it was produced doubtless largely by pus toxins, or the mixture of these toxins and tubercular poison, and also by the influence of the lesions and their débris. Did not such complications argue earnestly for discriminate treatment?

Now consider picture of Case C and note all the differences carefully. The picture of its sputum shows pus cells, bacilli of tuberculosis, tetragenii and staphylococci (the latter numerous), each kind of which is capable of producing toxins that may separately, in a measure at least, cause cell, nerve and blood poisoning and fever. What special damage the combined toxins may cause I will not undertake to say. It is sufficient for our purpose to know that this mixed case, with only a very few small tubercular spots scattered in the upper third of one lung, exhibited temperature to 102 F. in the afternoon, coughed and expectorated a good deal of muco-pus with yellowish tinge, and did not do well under antitubercular serum alone. The disease yielded somewhat to a combined treatment, including antitubercle and antipyogenic sera hypodermically with iodin and various forms of judicious inhalations of respiratory sedatives and disinfectants. The patient is patched up, perhaps, only for a limited time. Yet to-day (five years after manifestation of disease) he is living in comparative comfort, without fever, and is working. But there yet remains in him evidence of lesions in quiescent state. These are liable to break down in the future, although with proper care he may retain his improvement.

I now draw your attention to Fig. 4, designated as of "Clinical Records," 1902. It shows sputum containing epithelial cells, few pus cells, tubercle bacilli, pneumococci, and some pyogenic bacteria. This patient exhibited infiltration in the upper half of the front of the right lung, with considerable aching opposite that locality. Fever arose as high as 104 F., but usually wavered between 100 and 103. A confused kind of pneumonia, limited in area, existed, and persisted for three months, after which resolution began and progressed slowly for weeks, leaving the lung impaired in elasticity, but not crepitant. Bronchial râles of a mucous kind were of course often present. Finally the pneumococci disappeared and the pus germs increased. As long as the latter were present in large quantities the temperature ranged from 99 F. in the morning to 102 F. in the afternoon. Later the pus germs decreased considerably, the bacilli of tuberculosis remaining scattered; then the fever wavered between normal and 99 or 100 F. At the time of this writing the temperature was between 97 and 99 F.

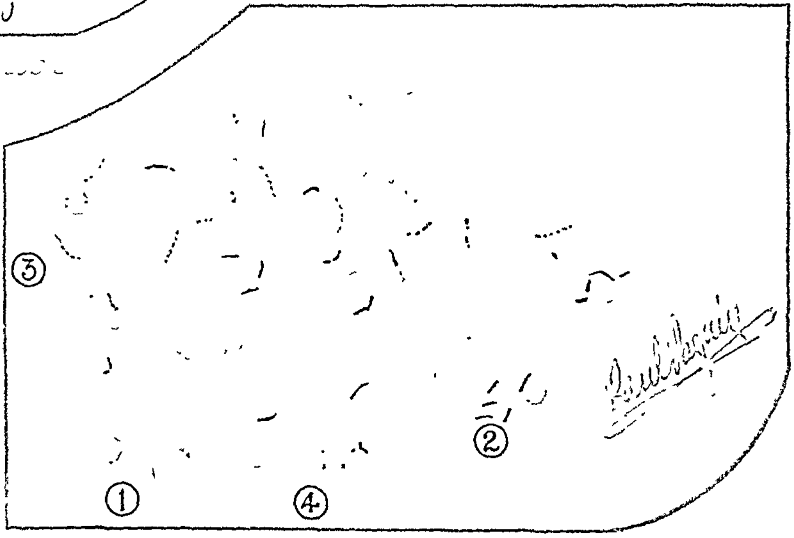
As soon as placed under my care this case received treatment applicable in limited pneumonia lesions of this type. It would, I am sure, have been useless to have put such a case under the influence of any therapeutic measure strictly within the line of the routine or specific treatments of consumption. What, for instance, could forced or voluntary inhalation have accomplished? Nothing but harm. The case lives in semi-comfort.

The microscopic display in Fig. 5 is from a case with a cavity four years old. La grippe and hemorrhages had been the first features of the development of the malady. The patient had done poorly most of the time for two years—la grippe recurring three times at least—but for the last year the case has presented comparatively few bacilli of tuberculosis, and this rarely. Cicatricial tissues and membranes seem to be slowly forming in the cavities and the healing process seems to be generally gaining ground. A mixed treatment,



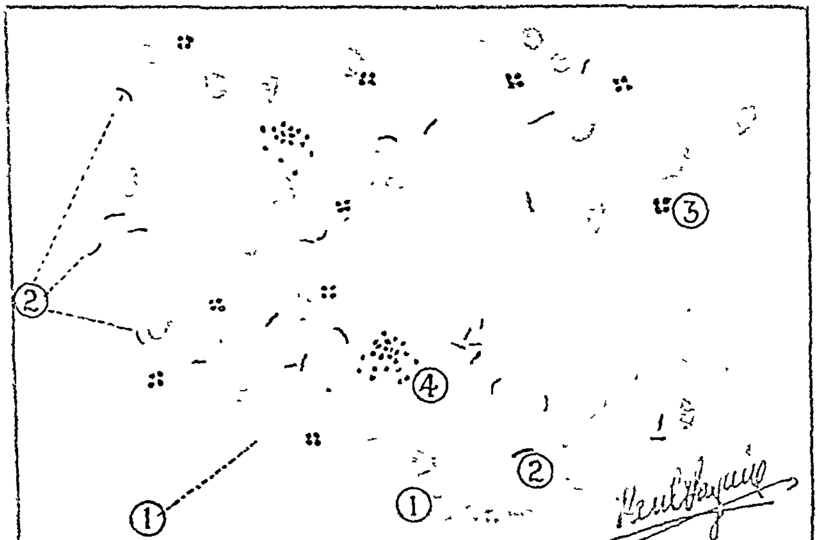
[illegible] CASE [illegible] OF TUBERCULOSIS
1 BACILLI [illegible] PUS CELLS
3 EPITHELIAL CELLS
TEMPERATURE [illegible]

FIG 1.



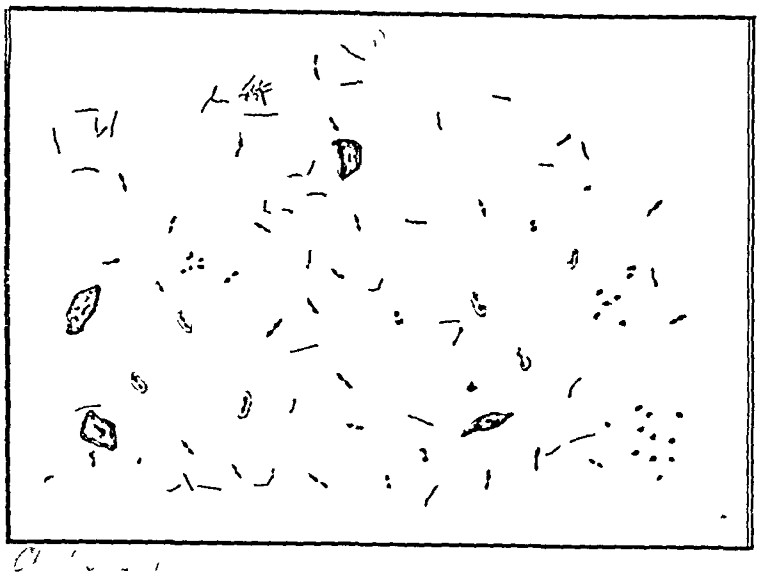
CASE 3B-RECORDS 1899-1900 ① PUS CELLS
② TUBERCLE BACILLI ③ STREPTOCOCCUS
④ STAPHYLOCOCCUS
TEMPERATURE 99 TO 103 °F.

FIG. 2.



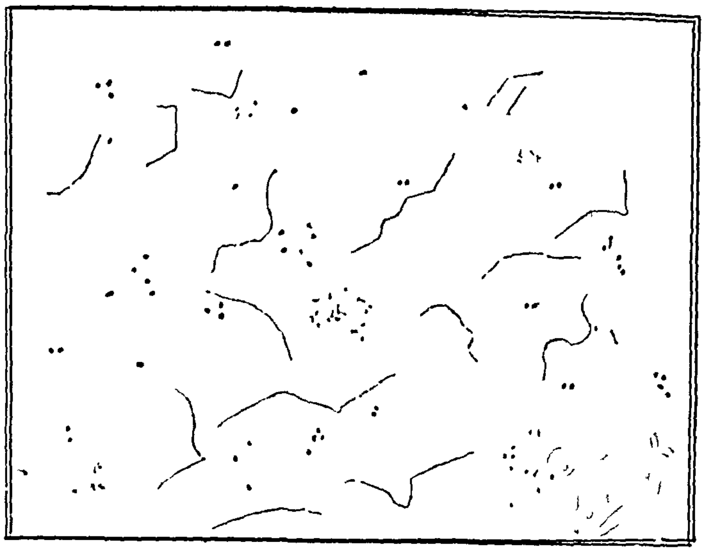
CASE C-THREE YEARS AFTER EVIDENT MANIFESTATION OF CONSUMPTION. ① PUS CELLS - ② BACILLI OF TUBERCULOSIS
③ MICROCOCCUS TRETRAGENUS ④ STAPHYLOCOCCUS ALBUS
TEMPERATURE 97 4/5 TO 102 °F.

FIG. 3.



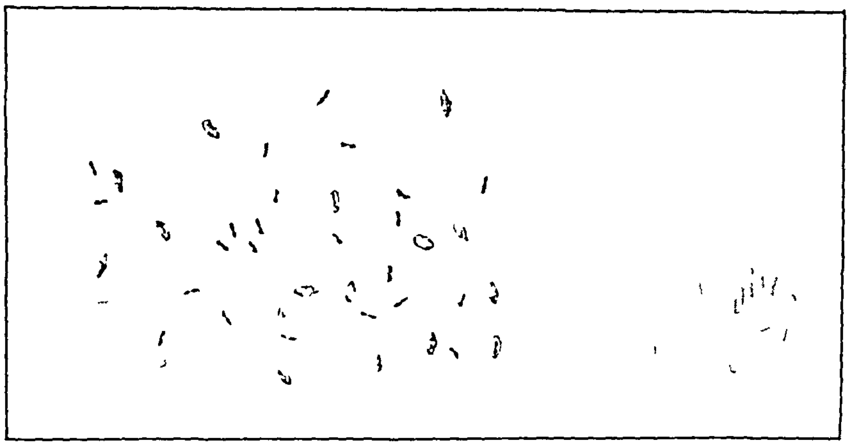
[illegible]

FIG 4.



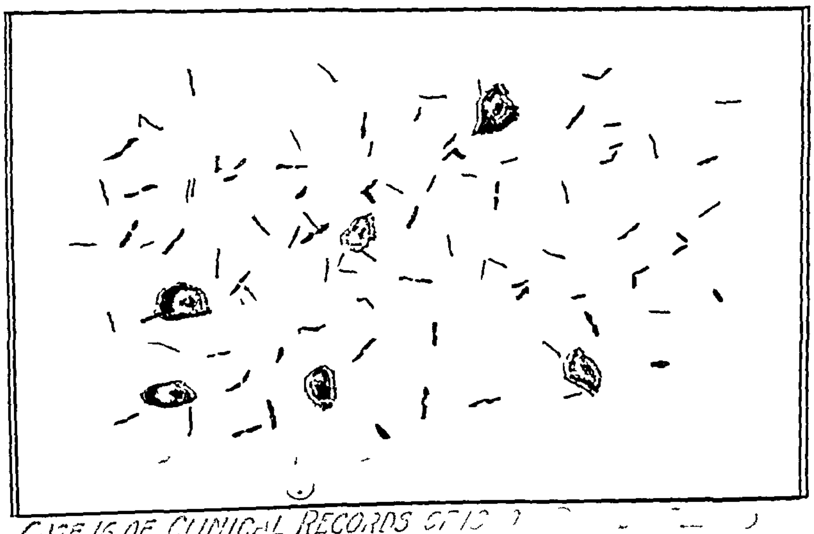
[illegible] OF TUBERCULOSIS
[illegible] ABOVE NORMAL
[illegible] ZOOGLEA OF
[illegible] FILAMENTOUS BACILLI UN-
[illegible] F

FIG. 5.



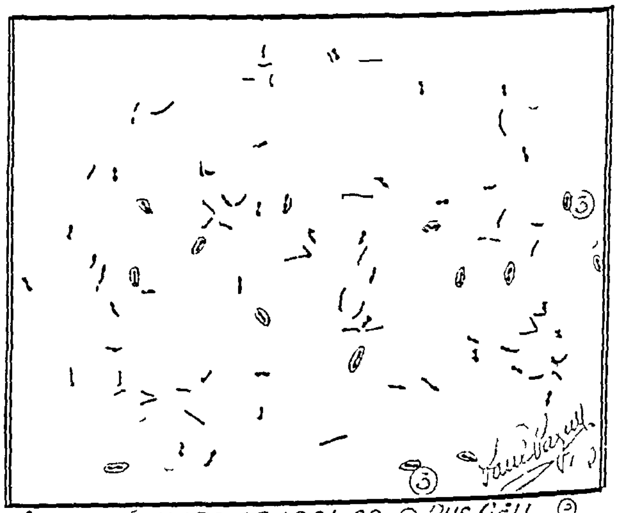
[illegible] COCCI WITH
[illegible]

FIG 6.



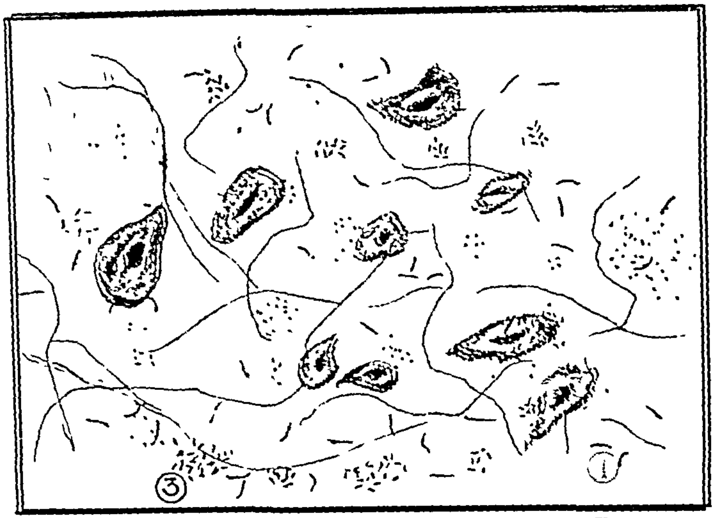
CASE 16 OF CLINICAL RECORDS OF 19[illegible]
EPITHELIAL CELL ② PNEUMO[illegible]
① BACILLI OF TUBERCULOSIS. TEMPERATURE [illegible] TO 103° F

FIG. 7.



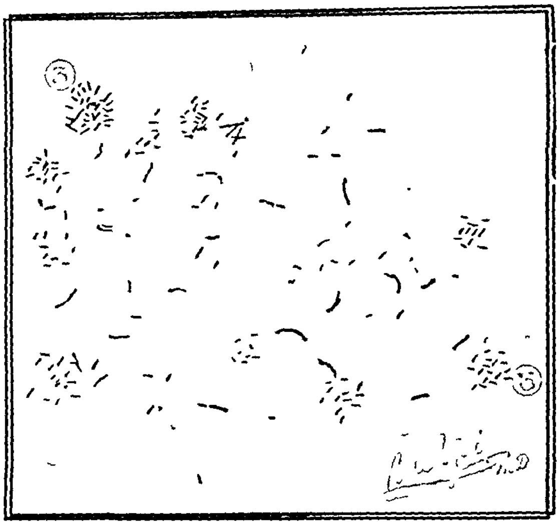
CASE IN SERIES OF 1901-02 ① PUS CELL. ②
BACILLI OF TUBERCULOSIS ③ PNEUMOCOCI ④
CHARCOT-LEYDEN CRYSTALS OF ASTHMA.
TEMPERATURE 99½° TO 103½° F.

FIG. 8.



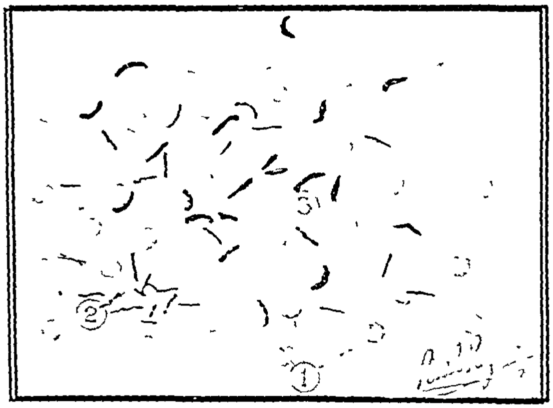
CASE OF DR B [illegible] BACILLI OF TUBERCULOSIS [illegible] COCCI [illegible] SMALL BACILLI PROBABLY PFEIFFERS GRIPPE GERM [illegible] FILAMENTS KNOWN AS LEPTOTHRIX BUCCALIS ⑤ EPITHELIAL CELLS, UPPER AIR PASSAGES

FIG. 9



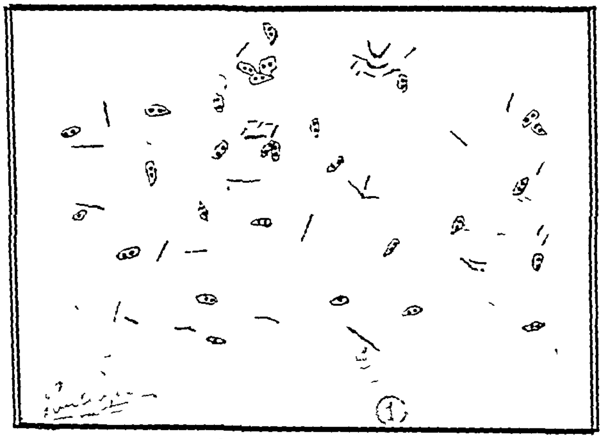
CASE A.A. [illegible] CELLS ② BACILLI OF TUBERCULOSIS [illegible] NUMEROUS PIOCYANUS BACILLI [illegible] TEMPERATURE 97° TO 101° F.

FIG. 10.



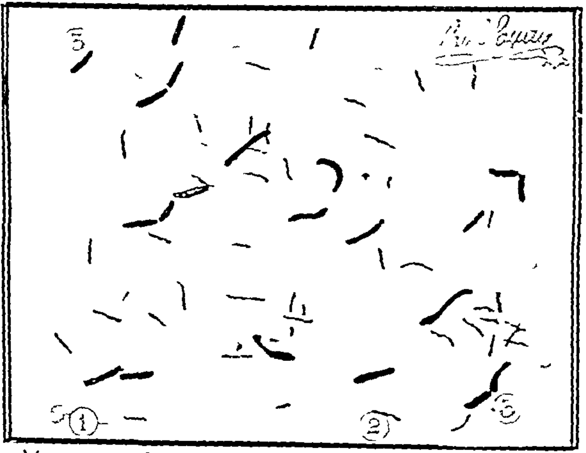
CASE II OF RECORDS OF 1899 FOETID EXPECTORATION ① PUS CELL ② BACILLI OF TUBERCULOSIS ③ LARGE BACILLI, PROBABLY THE LUMNITZER BACILLI OF FOETID BRONCHITIS. TEMPERATURE 97⅗° TO 101⅗° F

FIG. 11.



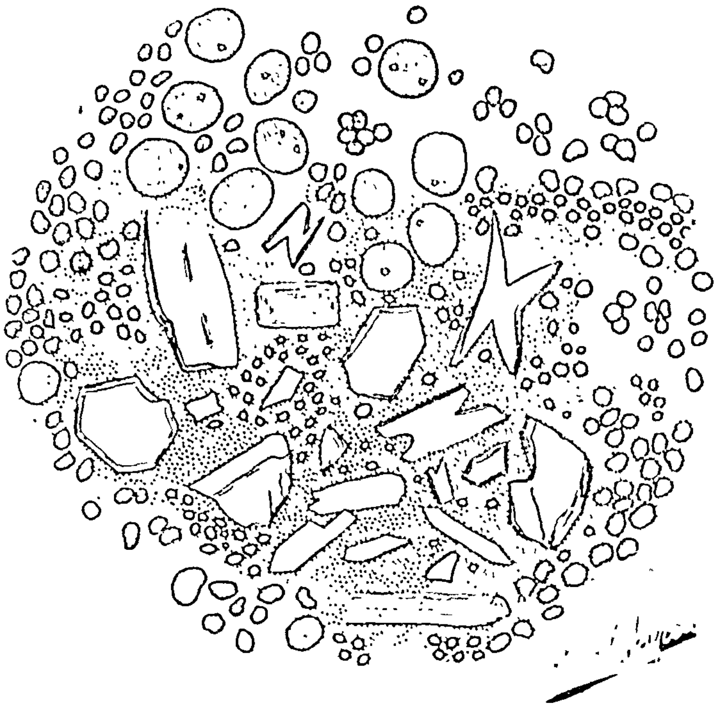
CASE NO 3 OF RECORDS 1898-99 LA GRIPPE & TUBERCULOSIS PRESENT ① PUS CELLS ② BACILLUS OF TUBERCULOSIS. ③ DIPLOCOCCUS IN CAPSULE (PERHAPS AN INFLUENZA GERM) TEMPERATURE 98⅘° TO 102⅘° F.

FIG. 12



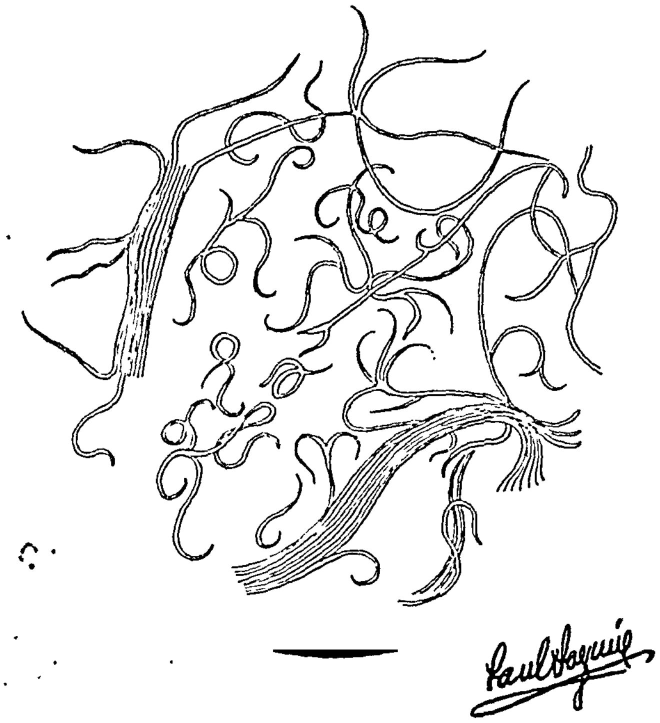
NO 12 OF RECORDS 1901-02 CASE B.B. ① PUS CELL ② BACILLUS OF TUBERCULOSIS ③ LOOKS LIKE THE ORGANISM KNOWN AS BACILLUS CRASSUS SPUTIGENUS (PATHOGENIC GERM) TEMPERATURE 96° TO 100⅖° F.

FIG. 13.



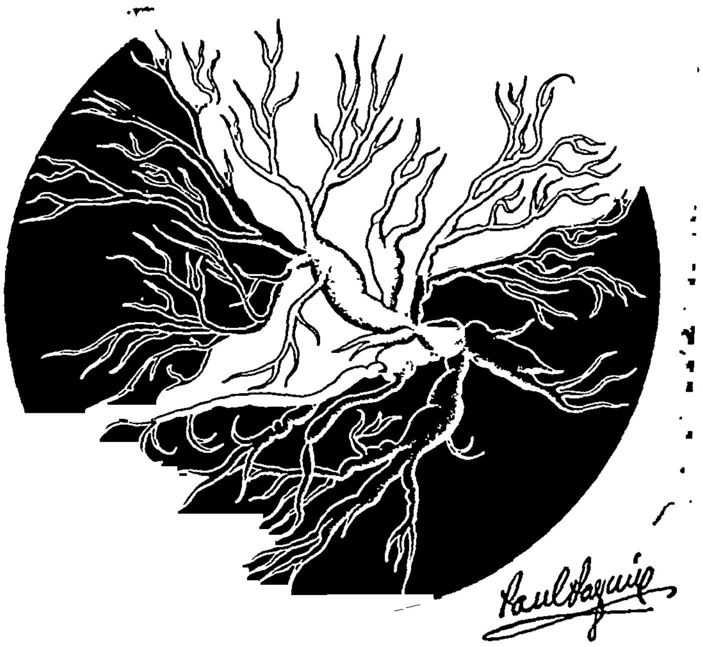
MATERIAL IN SPUTUM OF BRONCHIECTASEY - PEYER - AUTHOR FOUND SUCH SPUTUM MATERIAL IN COMPLICATED CASE OF TUBERCULOSIS AND BRONCHIECTASEY - 1894.

FIG. 14.



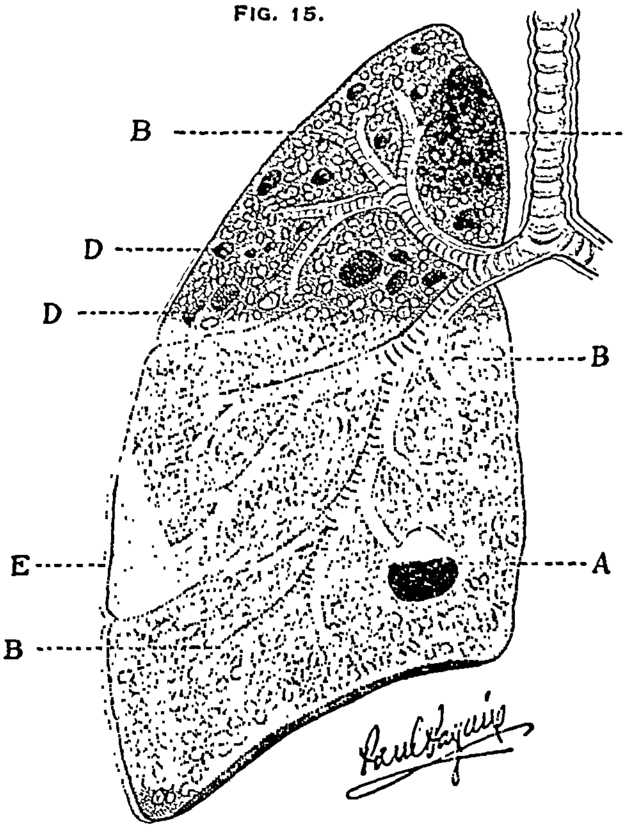
ELASTIC FIBRES IN TUBERCULOSIS. FOUND IN CASES OF SOFTENING, ETC., IMPORTANT DIAGNOSTIC & PROGNOSTIC FEATURE, - (FROM PEYER, PAQUIN AND OTHERS.

FIG. 15.



FIBRINOUS CAST OF SMALL BRONCHI (PEYER & OTHERS RARELY MET IN TUBERCULOSIS. FOUND BY THE AUTHOR IN FEW INSTANCES UNDER SPECIAL CONDITIONS.

FIG. 16.



TUBERCULAR LUNG. ADAPTED FROM DA COSTA AND RECENT CASE OF PAQUIN'S. Ⓐ CAVITY WITH PUS. Ⓑ RAMIFICATIONS OF LARGE BRONCHI. Ⓒ DENSE CONSOLIDATION IN APEX. Ⓓ SCATTERED TUBERCULAR LESIONS. Ⓔ INFILTRATION.

FIG. 17.

including serum as the chief remedy, the cacodylates and climatology, are constantly in use.

This expectoration shows the existence of staphylococci in small numbers, some zooglea of more minute cocci, which I am not prepared to name, and some bacilli. also of an undesignated character. At one time the bacilli of tuberculosis, different pus and air germs, were numerous, and the temperature then ran as high as 103 F. When this specimen was taken the tubercle bacilli happened to be absent, as they had been for some months, and the temperature did not reach higher than 99 F. In fact, the last year it rarely ran over this point, except during occasional periods of congestion. At present, however, in the morning it sometimes goes down as low as 96 and 95 F. without appreciable discomfort. (Such a depreciation of temperature in the morning is not an uncommon thing in many kinds of tuberculosis.) The patient is now better nourished than at any period of her life, being several pounds above her best weight of her healthiest days. Temperature still wavers between 96 and 98 F.

The sixth picture of the series, Case 44, shows pneumococci and pus cells. The patient had tubercular laryngitis mildly and a large consolidation with pain in the upper third of the left lung. The temperature ranged between 99 and 103 F. Three months before the bacilli of tuberculosis alone had been found. The patient escaped my observation during this period, after which he again presented himself for examination. At this time a congestion of the diseased lung was manifesting itself, the pneumococci appearing in small numbers, as in this cut. In two days, however, they increased enormously. Evidence of congestion and some inflammatory manifestations remained for several weeks. Then a few bacilli of tuberculosis were found. After the pneumonia symptoms had disappeared these bacilli appeared in greater numbers than ever before, but the temperature went down to between 98 and 100 F.

Here is a case of localized pneumonia, complicating consumption, something like in the preceding exhibit, and naturally it suggests also forms of treatment other than those for simple or different forms of mixed tuberculosis. Such measures were instituted, specific and general, to fit the conditions at the proper moment, including special diet, milk, cream, plasmon during sore throat particularly. The patient is now at work, walking miles daily, as an insurance agent, but he is hoarse, though not suffering.

The next picture, known in my records as No. 16, 1900, presents a peculiar mixed infection of tuberculosis. In it are exhibited Friedlander's pneumobacilli, with bacilli of tuberculosis, amid a considerable amount of pus and a few epithelial cells. This case, which died a couple of years ago, suffered at first in the right lung, front and back, from top to bottom, almost complete consolidation. No treatment succeeded in reducing it in the least. Portions of it softened after a while and were expectorated in pieces mixed with pus. About that time the left lung became seriously involved, and finally death resulted. These pneumobacilli remained almost to the last—long after various pus and putrefaction germs had appeared. The temperature never was normal and often went as high as 105 F. It usually wavered between 99 and 103 F.

The eighth figure or case in series 1901 and 1902 is intended to show the finding of the microscope in the sputum of a patient who was suffering from asthma and tuberculosis, with a very limited area of consolidation. The bacilli of tuberculosis and pneumococci were present, and here and there we see Charcot-Leyden crystals and pus cells. As long as the pneumococci remained in large numbers and the infiltration kept prominent the temperature went as high as 103 2/5 F. By degrees resolution took place to a considerable extent, and these germs finally disappeared. The lungs remained impaired, however, and the bacilli of tuberculosis are still present at this writing. But fever with these germs alone does not rise higher than 100 F.

No argument is necessary to show in this case also the need of some circumspect, judicious differentiation in diagnosis and treatment.

Picture 9 (from a patient of Dr. B.) presents a rare combination of débris and bacteria. It includes nasal, bronchial and pharyngeal secretions and excretions with germs. In it we see bacilli of tuberculosis, some fine cocci that do not resemble much, and yet perhaps are, Pfeiffer's influenza (or grippe) bacteria, some long *Leptothrix buccalis* and some epithelial cells. I do not know the history of this case further than was indicated by this presentation, and that la grippe was said to exist in the patient when the sputum was gathered.

I now draw your attention to the tenth picture, designated as AA. In it you will find pus cells, bacilli of tuberculosis and small bacilli of green pus. In this case, analyzed in 1900, there existed scattered areas of consolidation, having respectively, doubtless, a tubercle or more as their nucleus. Patient suffered greatly from bronchorrhea, the matter from which was usually green in the morning. Bacilli of tuberculosis were not always present. Temperature seldom went higher than 99 F. Occasionally it reached 101. He has remained under my observation for nearly three years and is still living, although practically incapacitated for regular manual labor. Remedial measures, including hygiene, nourishment, climate, the cacodylates with iodin used at proper times, and occasionally antitubercle serum, seemed to have served the purpose of holding him in comparatively good condition and free from suffering. There is a decided improvement since 1900.

Fig. 11, designated as Case II, 1899, records bacilli of tuberculosis and other chief characteristics of sputum of a peculiarly offensive kind, which came from a case that fell under my observation in 1899. This patient also suffered from profuse bronchorrhea, but the color of the sputum was brownish and had a very fetid odor. He died with evidences of gangrene a few weeks after my first examination. Every form of supposedly useful treatment, including antiseptic inhalations, had been used without avail before I was called in consultation, and further efforts were not more successful. The patient had used creosote at enormous doses daily for a year without benefit.

The twelfth picture shows germs that I found in the sputum of a case which I examined for a St. Louis physician in 1898. You will notice that the bacilli of tuberculosis are present, some small pus cells and small diplococci and single cocci, with and without surrounding envelopes. (The difference in appearance of these supposedly grippe germs and those seen in Fig. 9 may be due to different staining processes and microscopic amplification.) Temperature 98 4/5 to 102 4/5 F.

The thirteenth picture, No. 12 of records, marked BB, shows the germs found in a patient who died in a sanitarium in 1901. He was not under my care and the history of the case is not at hand. This picture is shown chiefly to present a large germ which I had never found but once before in connection with tuberculosis.

While these thirteen pictures are practically all of different kinds, it will be noted that some pneumonia germs were present in four instances. In my experience of many years the pneumococcus has been present and a common complicator of pulmonary tuberculosis. It is perhaps as frequently found as either of the pus germs that reach the lungs, and sometimes assists in the pathologic processes.

If so many kinds of germs and complications in phthisis indicate anything, they surely indicate the necessity to pay the strictest attention to exact methods of differential diagnosis, whether the cases appear before us early or late, and that we can never be sure that we are applying proper measures without possessing proper knowledge of the pathology of each individual.

I shall now present to you a few pictures of another class, leaving out the bacteria, but showing certain débris and lesions which also have their indications in therapeutics. Two or three of these illustrations are familiar to most of my readers; they have been borrowed in part or in whole or adapted from Peyer and Da Costa.

In the first of these are to be seen the debris found in bronchiectasy. I have seen but one case in which tuberculosis and this bronchial affection clearly coexisted. But the combination is probably more common than this instance would indicate. The material in this expectoration includes pus cells, fatty globules (probably from broken-up leucocytes) and crystals of triple phosphates (irregularly formed) produced by the liberation of ammonia from the nitrogenous compounds in presence of magnesium. Bacilli of tuberculosis in such a mixture are not easily stained, and some other germs, too, are sometimes hard to discover. But the voluminous amount and mixed nature of expectoration in similar conditions should not mystify us or lead us to hasty conclusions eliminating tubercular complications. Prolonged observations, oft-repeated analyses in the course of weeks and months, may be required for proper diagnosis.

Next we come to the elastic fibers, Fig. 15, the significance of which every physician knows. Unfortunately, in sputum analyses they are too often overlooked or neglected. When it is known that they constitute evidence of the destruction of lung tissue, even in early stages of softening, their presence or absence should in all cases, if possible, be established as a guide in prognosis and treatment.

In the third of these, or Fig. 16, is represented a fibrinous cast of bronchi usually existing but rarely expectorated in cases of chronic croupous bronchitis, and very rarely found in connection with tuberculosis. In this particular case, however, the bacilli of tuberculosis had been present in small numbers, but there had been a prior history of chronic bronchial catarrh. At the time the patient came under my observation both sides of the bronchial tree suffered from this condition and dyspnea was very great. Partial infiltration of small areas existed here and there in both and increased slowly. All treatments failed to produce any good results. One day this patient, after using home inhalations of creosote, guaiacol and other antiseptics in glymol, which he had kept up under the advice of another physician for some months, undertook to climb a hill three hundred feet high. On his return he was seized with very serious congestion of both lungs and severe coughing, and died, asphyxiated, in two hours.

Next in order is the consideration of certain important gross lesions in pulmonary tuberculosis. For this purpose I here exhibit an illustration, Fig. 17, showing the essential common features in certain stages of phthisis. With it before us, and bearing in mind the microbiology of tuberculosis, as discussed in this paper, let us endeavor to realize the merits and demerits of various treatments and their effects on the anatomy, the physiology and mechanism of the respiratory organs, as well as, in a measure, on the system generally.

This section of the right lung, trachea and large bronchi shows the following structures and lesions: first, the lower half of the lung appears sound, excepting a cavity (*a*) (although in this half of the lung the tissues may contain concealed small tubercles); second (*b*), the distribution of the large ramifications of the right bronchial tree (down to about the point where the bronchi are about one-sixth of an inch in diameter), penetrating infiltrated and consolidated spots in their course and communicating with the cavity mentioned above; third, a dense and old consolidation (*c*) at the apex, with slight surrounding infiltration; fourth (*d*), tubercle centers scattered in upper third with sound intervening tissue; fifth (*e*), a diffuse, comparatively new infiltration at the side in the middle lobe.

Now, it may be well at this point to refresh our memory about the normal anatomy and physiology of the lungs in order to realize the nature and significance of these lesions and the kind of therapeutics indicated.

Briefly, the lungs consist of a mass of aerial tissue made up of lobules which are "joined together by interlobular cellular membrane, each lobule constituting a distinct lung in miniature, having its own separate vein and artery; that these lobules do not communicate directly with each other;" that their ultimate terminals consist of a collection of microscopic air cells, "alveoli of exceedingly delicate nature, ranging in size from 1/200 of an inch to 1/100 of an inch in diameter," which are in communication with the air by means of filiform bronchioles; that these bronchioles are formed of delicate circular and longitudinal elastic fibers with flattened epithelium up to the point in their outward course, where they reach 1/24 of an inch in diameter; that further out they possess cartilage and a mucous coat, and gradually become larger and denser and stronger as they simplify and progress toward the trachea; that the pulmonary artery accompanies the bronchi branch for branch to the *minutest divisions* (making possible direct medication by means of the blood); "that the circulatory system forms a network of capillary blood vessels of the alveoli where the exchange of the gases (the oxygen of the air and carbonic acid of the system) takes place;" that amid this capillary network of the alveoli, beneath the endothelial layers, there exist lymph spaces which communicate with lymphatic vessels, that get eventually in communication with the air on one hand and the pleura on the other, thus opening innumerable channels for lymphatic and pleuritic infection by microbes inhaled into the lungs.

The important facts I wish chiefly to draw attention to are that the remote divisions of the bronchioles are of microscopic size, therefore invisible to the naked eye; that their infundibula are made up of minute cells of about *1/200 of an inch in diameter, and that the* mass of the lungs consists of inflated, spongy tissue, which these cells and connected structures form, and that the blood vessels permeate them everywhere, assisting in the exchange of carbon for oxygen, and finally, that a system of lymph vessels, glands and interstices involves all the air cells and puts them in communication with the outside air and pleural cavity.

We may add that the bronchi, large and small, and the air cells secrete mucus and that, under irritation, they may form sufficient of it and of certain pathologic material to fill them more or less and obstruct patches of lung enough to prevent sufficient communication with the air; and, furthermore, that by inflammatory processes the plasma of the blood may in part filter through the vessels and cause infiltration of the lung tissue, making it more or less impermeable to the air inspired.

The facts related in the two preceding paragraphs suggest and explain some questions of interest in tubercular pathology and therapeutics. To begin with, the anatomy and physiology of the lymphatic system in the lungs show how nebular intrapulmonary medication is wholly impotent in perhaps all cases involving the necessity of reaching lymphatics, which is so common. The lymphatics do not breathe, therefore the vaporized drugs can not get into them. This anatomy and physiology show also how and why we have so many cases of tubercular pleurisy and so many kinds of secondary tuberculosis in various organs of the system. Diffusion of the disease germs takes place through the lymphatic channels.

In the circulatory system, affecting the spongy tissues so thoroughly, we find, on the other hand, the explanation of the success often obtained in the treatment of tuberculosis by internal or hypodermic medication where direct lung measures fail. More of this farther.

To bring the important question of therapeutics to a focus, I will specify that there are two chief divisions of treatment. First, the aerial division, which includes in part climatology, pure or medicated air, and the artificial efforts to drive remedies directly down into the lungs; second, the circulatory division, which means all the efforts to reach the lungs and influence the system generally by means of the blood and lymph circulation. This includes internal medicine, hypodermic injections and dietetics, either of which can be of service only after absorption of the remedy or food in the system. Both of these divisions have their advocates, both have their usefulness and limitations, and both are abused by those who prescribe mindless of pathology (among whom, by the way, are very widely known men, who seem not to understand analytical work or have it done crudely by inexperienced persons). In the first or aerial division belong numerous, often reckless, usually haphazard forms of inhalations, tracheal injections, sprays and nebula, which in their place and at the proper time have a measure of usefulness. How far can inhalations reach, for instance? Even if the normal anatomy and physiology of the lungs permitted it, it is evident that the consolidations exhibited in the picture of the section of the lung here presented would allow very little or no air to reach the alveoli or to reach properly even the periphery of the lesions, far less the structure of the central portions. By what law, I ask those who commend and apply intrapulmonary medication generally or as a routine practice, can any form of pressure cause medicated air, or any other remedy, to reach the ultimate structure of such diseased tissues and heal them? Is there any way to force nebula into such patches? Decidedly no, and when it is remembered that all tubercles, large or small, are to some extent accompanied by more or less consolidation, which precludes even proper natural respiration, who can not realize the futility of all efforts to force inhalations into them? Yet it is claimed that not only such consolidations *en masse* can be reached by fine nebula, but that the air cells that constitute them can also be medicated by this means under a pressure of thirty, forty or eighty pounds! This claim is so remarkably contrary to known physiologic and pathologic facts that one who reads it or hears of it wonders at the daring of those who advocate it before the intelligent minds of the medical profession. It is wholly incompatible with the laws of physics and physiology. Indeed, while nebulized medicines are really very fine divisions, these are individually visible to the naked eye, and to drive one of them down in an air cell would be practically like forcing a globe the size of a baseball into a receptacle the size of a marble.

It must be remembered, besides, that the air cells are always partly filled with residual air, which can not be forced out, and that these cells can not be unduly dilated without tearing them open. Furthermore, the lungs within and without sustain an average (at our altitude, at least, Asheville, N. C.) of 10 to 12 pounds of pressure. They are maintained in their natural condition of partial expansion by this in and out equilibrium of air pressure. Suppose the pressure within the lungs is increased without compensation on the outside, what law would prevent dilation or rupture? We see, then, that certain kinds of intrapulmonary medication preached to the profession and public are far from always being right and safe. In truth, only three benefits can be derived from the best forms of direct pulmonary medication; that is to say, from tracheal injections and inhalations, to-wit: a limited degree of disinfection of such parts as such treatments may reach; second, a limited palliative influence over such irritated points as they traverse or touch (more or less poorly), and, finally, a limited degree of influence in subjugating cough. In no case is the *indiscriminate* use of such measures and their medicines right, and some conditions sometimes forbid them; for instance, seriously inflamed bronchi and acute congestions. To obtain the results possible by nebular medication, all that is necessary is to have an apparatus capable of forming fine nebula or sprays, such as the Globe Nebulizer or the Robertson and De Vilbiss instruments, and then have the patient inhale proper remedies at their leisure; or a room may be filled with nebula or medicated vapors. High pressure simply makes finer nebula; these, as made, are sent with the full force back of them into the throat, from which the patients breathe in what they can. It does not appear to be good practice to apply 40 to 80 pounds of pressure into the throat of tubercular patients. They have more than enough trouble in keeping their throats from hyperemia and secondary infections without increasing the tendency to these dangerous conditions by unnecessary rough treatment of sensitive and delicate membranes. Evidence showing the correctness of this estimate is not wanting.

I need not dwell on the value of the second division or circulatory medication. It is established beyond controversy that certain drugs in certain forms can be sent through the lungs by means of the blood just as easily as they can be sent to all tissues that receive nourishment. Whoever knows the physiology of the circulation must accept this as a fact. It is true that those lesions which are more or less solid fail to receive blood freely, but even they absorb the essentials of the blood from neighboring sources. Besides, this form of medication, administered hypodermically or otherwise, may be used so as to produce most beneficial effects by direct and indirect influences on the blood, the nerves, the digestive organs, etc., etc.

Having in mind the numerous different kinds of pulmonary tuberculosis, we can not escape the conviction that many forms of treatment now in vogue, besides the mechanical means discussed here, are also useless and some of them dangerous, if not fatal, when applied without respect to the pathologic conditions present at the time, as, for instance, the use of creosote in a reckless manner and the abuse of alcoholics. Nor is full knowledge and realization of tubercular pathology and microbiology sufficient for the best work. It is, moreover, necessary to realize the condition of the digestive, eliminative, circulatory and nervous organs and to apply properly the means necessary to correct whatever fault they may exhibit. Observe, for instance, the sudden rise of temperature from normal to 103, 104 and 105 by indigestion alone, or in connection with absorption of pus, etc.! Such conditions do arise, complicating consumption by addition of auto-intoxication to it. I have seen such occurrences (auto-intoxication from the alimentary canal) arrested by one stomach and one intestinal lavage, which, by the way, is a particularly common necessity for the control of digestion, because indigestion is so common in almost every case of pulmonary phthisis in which ordinary drug measures are not always applicable.

To be specific as far as possible on a general question, what, then, constitute the most reasonable and most promising methods of treatment of tuberculosis pulmonalis, particularly in mixed conditions?

The details are not appropriate here. In fact, I have gone already beyond my first intention on the subject of treatment. But there is reason to indicate the basic elements that need be understood in mixed and simple tuberculosis if one is to pursue a right course and try to cure. In all cases we need first, nourishment, by which I mean the assimilation of proper food supplies, including under this head, for convenience, the breathing of proper air. Without these in sufficient quantity and good quality, no remedy will succeed. With them as foundation, diverse treatments, applicable in different conditions, may be properly selected after understanding each case. Thus the reliable, tested antituberele sera (not the ordinary, untested commercial stuff), the cacodylates, the assimilable and non-irritable iodins, tonics, appetizers, stomach lavage, raw beef juice are useful in probably all cases, provided the proper moments for each or certain combinations of them are not neglected.

No matter what their nature, special complications demand special measures of relief. For instance, pulmonary congestion may be relieved by a hygroscopic plaster; cough by camphor, hyoscyamus, heroin, codein, hydrocyanic acid, etc.; dyspepsia by stomach and intestinal lavage, pepsin, takadiastase, and other dietetics; intestinal auto-intoxication by high colon lavage and intestinal antiseptics; anemia by soluble iron, milk albumin, protonuclein, etc.

I repeat that the most important problem in the treatment of consumption of any kind is that of nourishment. It must be sufficient in every instance or failure is unavoidable. Speaking in a general way, milk, cream, meats, a dozen of whites of eggs in water every day, whole eggs in sherry wine, fish, oysters and appropriate meat juices are among the very best foods. Potatoes and bread are among the most useful of vegetable origin. Unfortunately, in the majority of cases that come to the physicians, there arises the necessity of feeding them, at times, with more highly nutritious and assimilable substances than is afforded by natural products. This is especially common in enfeebled stomachs and sore throats. Thus, in throat tuberculosis, for instance, both local pains and indigestion are usually present. The pain produced by swallowing is so excruciating at times that even water produces torture. In such unfortunates, raw eggs, milk and cream are usually the most easily swallowed natural foods. But they may not always suffice, and often they upset digestion very much. This is often true of sweet milk. I have tried all sorts of artificial nourishments to assist these, or alone in many conditions. I have made numerous trials of many manufactured and home-made products in cases accompanied by poor digestion, assimilation and painful deglutition. Several are pleasant, but few are nourishing enough.

There is one kind of food used by many now which is possessed of special virtue as nourishment and medicine at the same time. It is the fresh juice made daily from raw beef.

Professors Charles Richet and J. Héricourt, both medical experimentalists and teachers of international reputation, presented to the Congress of Medicine in 1900, and afterward to the Academy of Medicine of Paris, many reports on their clinical experiments with such juice in consumption. Since then numerous physicians in every country have verified the claims of these scientists that raw beef juice is not only nutritious to the highest degree, but that it possesses specific curative virtues to arrest the malady. But it must be raw, not heated in the least. Its serum must be unimpaired, for this is internal sero-therapy, so to speak. To get good results large quantities must be given daily—all of the juice of four to six pounds of steak between meals. Strange to say, this does not interfere with the regular meals or the application of a special diet. It will be a pleasant surprise to those who have horror of raw meat to know that this fluid is very palatable and may be made delightful. My experience with raw beef juice in large quantities has been most gratifying, particularly in connection with plasmon, the cacodylates, serum, iodin, etc.

The unfortunate part of this most useful measure is that few presses can extract more than 25 per cent. of the juice from raw meat, thus reducing the chances of its use and making it expensive. I have tried everything in the shape of press I could find on the market, excepting high-priced hydraulic presses, and only the Hayes Meat Crusher have I found to extract more or less easily 75 to 85 per cent. and stand the effects of hard pressing without breaking, but it is in the present size a little expensive. As it is essential, as I have said, to use large quantities of beef juice to get any good results, and, as all that exists in six pounds of good beef is usually necessary every day, it will be seen at once how costly it would be to use presses extracting only 25 or 30 per cent.

In conclusion, I urge the study of the results obtained in France and elsewhere with the cacodylates, reliable sera, iodin and beef juice in consumption.

THE NEW UNITED STATES PHARMACOPEIA.

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The numerous inquiries from all parts of the United States with regard to the appearance of the new Pharmacopeia would seem to require at this time a communication as to the progress of the revision, and the writer takes this opportunity of stating that the work is progressing favorably. On account of the death of the distinguished chairman of the Committee of Revision, Dr. Charles Rice, May 13, 1901, revision was necessarily retarded; nevertheless, the subcommittees to whom the details had been assigned have performed a large amount of work. The twenty-six members from all sections of our country, composing the Committee of Revision, were selected by the United States Pharmacopeial Convention in May, 1900, to complete the work of revision, because of their fitness for their work, and necessarily the majority are specialists in the various departments of therapeutics, pharmacognosy, chemistry, botany, analytical chemistry and various other departments which are represented.

ORGANIZATION.

The work of the subcommittees is placed, from time to time, before the general committee by the chairman, in the form of a report, and this report is then voted on; the opportunity being given for each individual member to record his approval or disapproval of any of the details, although naturally much greater weight is given by members to the views and opinions of those who have devoted the greater part of their lives to the special work for which they were selected. Communication between members is mainly by correspondence, and the circular letters and private letters which have been sent out during the last two years number over four thousand.

METHOD BY CORRESPONDENCE.

Prior to the year 1880 pharmacopeia revision was conducted through personal meetings of the members, but in 1880 a different method was inaugurated, the committee was enlarged nearly fourfold and the method by correspondence established. The reasons for making the change were mainly to secure a larger geographical representation and a wider scope, because, as our republic progressed rapidly and the center of population moved westward, it became necessary to recognize the changed conditions and make the book as thoroughly representative of all sectional demands as possible. It can not be said, however, that either of the plans of revision—by correspondence or personal meetings of the committee—are without faults. There are members living to-day who have served the committee under both plans. The method by correspondence loses the value of that individual contact which every one recognizes as so important in revision work. Members are oftentimes loth to vote on certain subjects which are out of their special line, as they would greatly prefer to take the judgment of their colleagues, and a personal conference of the committee of twenty-six would result in the settlement of many questions, after hearing argument, in a much shorter time than would elapse after correspondence among the twenty-six members. But it was foreseen, when the change was made to the method by correspondence, that it would be impracticable to have frequent personal meetings of the committee, not only on account of the great expense involved (for some of the members would have to travel from one to two thousand miles), but as each member of the committee is a busy man it would entail great sacrifice and inconvenience to give up all home engagements and meet often at some distant point.

On the other hand, revision by correspondence has many advantages. It places on each member of the committee a greater sense of responsibility for each vote that he sends in to the chairman. His individual judgment is not swayed by oratory or the superior argumentative abilities of a speaker, and he may take more time to arrive at a correct judgment on the question than would be possible at a personal conference. The committee of 1900 has endeavored to secure the merits of both plans, for those questions which can not be well settled by correspondence are deferred until a personal meeting can be held. An experience of twenty years in revising the Pharmacopeia by correspondence mainly has developed many improvements over the methods first adopted, one of the greatest, undoubtedly, being the stability of organization, now assured through the incorporation of the convention and the separation of the purely business functions from the special work of the revision.

DIVISION OF LABOR.

All of the financial work and the publication of the book is now vested in a board of trustees, while the preparing of the manuscript and the revision proper rest alone with the committee of revision. The board of trustees secures information and the co-operation of the interests of the convention and the committee of revision by making the chairmen of these two bodies members of the board. It will thus be seen that the machinery employed to make a new pharmacopeia is not needlessly complex, and it is believed that all interests are properly guarded and the work of the judicious selection of medicines, the best processes for their preparation and the fixing of fair standards will be duly accomplished.

DIGESTS OF CRITICISMS.

One of the most valuable features connected with the work of revision of the Pharmacopeia of 1880 and 1890 has been the preparation of what are known as "Digests of Criticisms." These are bound books which contain a compilation of all of the criticisms and suggestions on the United States Pharmacopeia, gathered from pharmaceutic journals throughout the world. The criticisms are classified and arranged alphabetically, and are published for the benefit of any one interested in pharmacopeial work. They are furnished freely, without cost, except a trifling one to cover postage, and it is thus possible for any member of the committee to have constantly before him, when studying the preparations, all of the published criticisms that have appeared up to the time of the publication of the digest. It can easily be seen that this most excellent method, which was devised by our late chairman, will prove of the utmost value to the members.

INTERNATIONAL PHARMACOPEIA.

The idea of establishing an international pharmacopeia, which shall be an authority in all civilized countries of the world, has practically been abandoned, after having been under consideration by various international congresses for the last forty years. An international pharmacopeia once reached the stage of the manuscript form, and it was this actual practical demonstration which has had more to do with the abandonment of the idea than any other influence. When, after consultation among European physicians, pharmacists, chemists, botanists and experts, the international list of preparations appeared it was almost universally condemned. The French would not accept it because there were too many German and Austrian preparations found in the book and not enough French; the English would not give it serious consideration because medicines which had been used for generations by them were omitted; and Americans scarcely felt enough interest to inquire about it when they found that American preparations had been completely ignored. And so it must ever be, until the great day of universal peace, harmony and good-will, and when this time is reached probably no pharmacopeia will be needed at all.

An idea has, however, grown out of this long-continued agitation which promises practical results, and this is, for all civilized nations to agree on a uniform strength of what are known as "potent remedies," or as the French term it, "medicaments heroiques," and the International Congress, held in September, 1902, at Brussels, recommended such uniformity. The principal reason for establishing this kind of an international pharmacopeia is to secure uniformity in the dosage of such important medicines as solutions of arsenic and preparations of opium, digitalis, nux vomica, belladonna, etc., so that a patient traveling in any country and having a prescription containing a potent remedy runs little risk of danger on account of the substitution of Fowler's solution made by either a Swiss, German or English pharmacist for the one originally prescribed. For instance, if arsenical preparations were made throughout the world of 1 per cent. strength, all danger from this source would be removed.

It can not be hoped that the new United States Pharmacopeia will please everybody. No pharmacopeia in the world was ever published which was universally accepted by all of the affected interests. Anyone can be convinced of this fact who chooses to consult medical and pharmaceutic literature bearing on the pharmacopeias of the various countries. This is particularly the case with regard to admissions and expurgations. One physician or pharmacist sees in the book some drug or preparations which he has never used and possibly never heard of. Another looks through its pages and does not find his favorite remedy; but it must be remembered that the title of the book is "The Pharmacopeia of the United States of America," and a drug which may not be used in one section is largely used in some other. And again, some preparation which may have considerable local use finds no favor outside of a circumscribed locality, and it would be impossible to think of loading the Pharmacopeia with preparations which have merely a circumscribed use.

Neither can a pharmacopeia be expected to contain all of the new remedies which are exploited by the various manufacturing firms throughout the world. This ever-changing, yet never-to-be-suppressed condition imposes on the revision committee a most difficult task of selection. It can only recognize the newer remedies which have stood the test of sufficient time to demonstrate their value, and of late years the "embarras de richesses" has been so pronounced, and one good new remedy has been so rapidly supplanted by something better (if the advertisements of the manufacturers are credited), that the task of the committee has been greatly increased. Nevertheless, it is believed that the new Pharmacopeia, when it appears, will be abreast of the times and be recognized as fully worthy to stand with any of its predecessors, and contain between its covers a list of medicinal substances with descriptions, tests and formulas for preparing the same, which will be recognized throughout the length and breadth of the land as authoritative.

Music for Insane.—The "Medical Times" says that the authorities of Manhattan Asylum, Ward's Island, are making systematic experiments with the music cure, and have treated a dozen cases of melancholia, giving them concerts an hour long every afternoon with the harp, violin and piano. They report, after a month's trial, that improvement is shown, and that patients suffering from acute mania and hallucinations show more mental alertness and cheerfulness, and that one patient has been assisted almost to recovery by the violin alone.

CASE OF FUNNEL PELVIS WITH CESAREAN SECTION.

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HISTORY.

On May 4, 1900, in my service at the Chicago Lying-in Hospital, I saw the patient, aged 19, in her first confinement. She had been in labor twenty-four hours, the membranes had ruptured and dilatation was complete. The unengaged head presented, mobile above the inlet in L. O. A., and the woman was nearly exhausted by her long labor. The external measurements of the pelvis were small and the conjugata diagonalis could not be obtained. The outlet seemed contracted, but an estimation of the size of the child's head did not apparently preclude its passage and, with the usual preparations and precautions, a combined external and internal version was done. The anterior foot was seized and brought down and the extraction followed directly. No trouble was experienced until the head reached the inlet and refused to enter; under the combined use of pressure from above (on abdomen), the Walcher position and the Smellie-Veit method of delivery, the head slipped through the inlet, passed rapidly and without difficulty through the excavation to the bony outlet, where its progress was stopped. In spite of our utmost efforts the attempts to complete the delivery failed. The child was asphyxiated, craniotomy was done through the roof of the mouth and the mutilated head passed the contracted outlet with some difficulty.

In October, 1901, she reappeared, pregnant for the second time, but with no knowledge of the date of conception. She did not remember when her periods were interrupted, nor when she first felt life.

From examination it seemed probable that labor would occur about Feb. 1, 1902, and, appreciating the difficulties which the case presented, her own and her husband's consent was secured for the performance of any operation which would most nearly promise a living child.

Labor began at 2 a. m., February 16, and 8 a. m. she went to Wesley Hospital and was immediately prepared for cesarean section. No internal examination was made. The operation began three hours later, with the courteous assistance of Dr. Watkins and the resident hospital staff. Through the usual median celiotomy incision the uterus was delivered, the blood supply manually compressed and a median longitudinal incision made in the uterus, through which the child was easily extracted by the anterior foot. Contraction of the uterus was secured by massage and hot applications and the placenta was delivered. The opening in the uterus was closed by through-and-through sutures of chromicized catgut. After direct measurement of the inlet the abdominal wall was closed.

The thoroughly mature male child was cared for by Dr. Farrell and cried lustily. The head was well ossified and nonconfigurable; a small caput was found over the left eye. The child weighed 3,400 grms. (7½ lbs.) and gave the following measurements: Length, 52 cm.; bitem., 7.5 cm.; bipar., 9.75 cm ; occ-front, 12.5 cm.; occ-mental, 13.75 cm.; subocc.-breg., 10.0 cm.; occ-front-circum., 37.0 cm.; subocc. greg. circum., 33.0 cm.

The involution progressed rather slowly and at the time of the removal of the sutures the uterus was found to be adherent to the abdominal wall throughout the entire line of the wound, resulting in an involution which took place laterally, but hardly at all longitudinally—the uterus being long and narrow in form and extending to the umbilicus.

The convalesence was interrupted by a slight pleuritis, but at the end of the fourth week she left the hospital with her babe in excellent condition. Examination about three months later showed the condition practically unchanged.

IDENTIFICATION.

The measurements in this case are very interesting as showing a pure type of the "funnel pelvis" (masculine or infantile pelvis), by which is meant a pelvis with normal or only slightly contracted inlet and high lateral walls which converge strongly downward to a markedly contracted outlet. In the identification of this pelvis it is necessary to exclude certain anomalous pelves wherein the contracted outlet exists only in association with characteristic deformity of the vertebral column, such as kyphosis and spondylolisthesis, as well as those cases of uniform generally contracted pelves wherein there occurs a slight increase of contraction toward the outlet.

The absence of vertebral deformity excludes the first two, and the measurements are so characteristic of the funnel type that the diagnosis can not be confused with the uniform generally contracted pelvis.

The patient is 158 cm. high, with large, full and mature breasts, noticeably slight in figure with narrow hips and strongly converging genitocrural folds. The physiologic lumbar lordosis is diminished, no kyphosis, no rostration of symphysis, iliac venters rather straight and no evidence of early rachitis.

External measurements with tape and pelvimeter give sp., 19.0 cm.; crests, 22.0 cm.; troch., 26.0 cm.; Baudelocque, 19.0 cm.; circumference, 77.5 cm.; left oblique, 19.5 cm.; right oblique, 20.5 cm.; post spines, 8.5 cm. (average 7.5); and on same plane with sacrum. The sacrum is 16.0 long (average 10.3) and very narrow. Tip of coccyx to lig. arcuatum 7.0 cm.; tip of sacrum to lig. arcuatum 9.7 cm. outside, or allowing 1.0 cm. for thickness of sacrum 8.7 cm. inside (Klien's average 12.5, Garfunkel's average 12.3 cm.). The distance from tuberosity to tuberosity measured by the Breisky or Chantreuil methods and the Ayers pelvimeter was 8.5 cm., there being no practical difference in the result from either method.

The tip of the sacrum is easily accessible by the vagina and the coccyx projects acutely into outlet without ankylosis. The pubic arch is narrow, the symphysis high, the ischiatic spines also project markedly into the outlet. The linea innominata appear to be almost parallel, and the attempt to measure the conj. diag. never succeeded, as the promontory was apparently pushed upward and backward and was inaccessible to examining finger.

The inlet measurements were made directly before closing the abdomen and gave c.v. 11 cm. and transverse of 13.0 cm. Thus the inlet is as large as the average and the outlet is contracted in both diameters.

CLASSIFICATION.

Klien, who has made an exhaustive study of this pelvic deformity, classifies the varieties as follows:

1. Funnel pelvis with normal or only slightly diminished conjugate of strait in which—
   - A. Distance between the two tuberosities is only relatively short, but distance from tuberosities to sacrum is so small that both together make labor impossible.
   - B. Distance between the two tuberosities is absolutely so small that the head can not pass
2. Funnel pelvis with conj. of pelvic strait absolutely too short for head to pass unreduced—
   - A. Without shortening of transverse diameter of outlet.
   - B. With contraction of transverse diameter of outlet.

The very great importance of the pelvis strait is here well emphasized. Contraction in the sagittal diameter may be so great that the unreduced head can not possibly pass, even though the tuberosities are far apart—on the contrary, the antero-posterior diameter of strait may be normal, or relatively so, but the contraction of the distance between the tuberosities is so great that this point assumes the position and importance of the pubic arch, the occiput stems against it and the head is forced so far back that labor is impossible.

In the study of 439 labors Klien makes the following deductions, which I quote in brief:

> Where the pelvis is otherwise normal and the distance between the tuberosities is less than 9.5 cm., a mature child will give trouble during labor whenever the presentation is pelvic or shoulder.
>
> For unreduced heads in vertex position the boundary line for serious but not insuperable obstruction is found when the distance between tuberosities is 9.8 cm., other pelvic measurements normal.
>
> The conjugate of the pelvic strait is absolutely too small to permit the passage of the mature unreduced child when it is under 9.0 cm.

Hence, in classifying our pelvis according to Klien's system we find that the conjugate of the strait being less than 9.0 (8.7 cm.) and the marked transverse contraction of the outlet being associated therewith, it should be placed in group 2 B., which corresponds to the uniform generally contracted funnel pelvis of Schauta. According to Klien it is impossible for a mature unreduced head to pass this outlet.

ETIOLOGY.

Very little can be said concerning the etiology of this pelvic anomaly. Schauta believes it results from an original abnormal formation (abnormal height of small pelvis), whereby the promontory is placed high and pushed back, and under the influence of the body weight the shape is brought about in a manner similar to the kyphotic pelvis.

The altered direction of the burden explains the further changes in the reciprocal positions of the pelvic bones which unite for a common purpose.

While unable to add to this unsatisfactory explanation, I would like to emphasize the fact that the significant length of the sacrum and the abnormal height of the lateral pelvic walls must, in a normal convergence of the same, produce a definite contraction of the outlet as compared with the pelvis of normal height.

In support of the theory which minimizes the influence of the body weight, Fehling (confirmed by Thompson) shows that transverse expansion of the brim is present even at the third month of intrauterine life, and that the "long oval" form supposed to be normal in the fetus and newborn is a rare and pathologic—hence the name "infantile" as applied to the funnel pelvis is a misnomer. He concludes: (1) that the transverse expansion depends on the original formation and appears early, hence its production by the body weight is superfluous; (2) that sexual differences are generally present from the fourth month intrauterine, and are perfectly distinct at birth. These facts support the theory that the funnel pelvis is a primary developmental anomaly, and also if so much importance could be attributed to the unusual distribution of the body weight, a kyphosis might result therefrom, and the evident relationship between the kyphotic and the funnel pelvis could be explained, certainly in some instances, along the lines suggested by W. A. Freund in his paper on the pelekogenous origin of vertebral deformity.

FREQUENCY.

It is almost impossible to secure a definite idea of the frequency of this deformity. In Breisky's clinic at Prague, where more than usual attention is given to the contraction of the outlet, there were found 122 funnel pelves of all kinds among 2,070 contracted pelves, or

5.9 per cent. of the total collection as quoted by Schauta. Klien quotes Munch 17.8 per cent. of contracted pelves, Frankenhauser 13 per cent.

Both Schauta and Klien agree that these statistics are in no sense reliable, since no routine measurement of pelvic outlet is undertaken, and when performed a great variety of opinion exists as to what constitutes "funnel pelvis," and what degree of contraction shall determine. Prickards quotes 3,000 labors at Würtzburg, with 252 contracted, but no "funnel pelvis" is mentioned. Ludwig Savor among 50,621 labors reports four cases. Williams (Johns Hopkins) 1,000 labors with no funnel pelvis. Dobbin (Johns Hopkins) one of masculine type in 350 pelves. Fleischmann 2,700 labors with 24 cases of funnel pelvis, which subsequent writers agree must be of slight degree. Schroeder says: "This is a very rare form of pelvic deformity, and even more rare is contraction to a serious degree." Ahlfield gives 8 cases of all kinds in 3,000 labors at Marburg. Olshausen in discussion says: "Very rare, one always thinks of kyphosis."

Klien states that pelves which conform to No. 2 B of his classification, namely, with an absolutely contracted sagittal diam. associated with contraction of transverse diam. of outlet, are extremely rare, and he gives only four cases which have been reported up to 1896—one being his own, and the writer has been unable to find another, diagnosed and reported in literature up to the date of the present case, which produced an insuperable obstacle to labor by the natural passage.

CLINICAL COURSE.

It can not be supposed that these deformities occur without producing a pronounced effect on the clinical course of pregnancy and labor. Where the inlet is not markedly contracted the pregnancy will not differ from other cases, and where definite contraction exists the babe will be carried high, but the principal difficulty will occur when labor begins, for contraction of pelvic outlet is more serious than contraction of the same degree at inlet.

In mild degrees of contraction where spontaneous labor is possible the second stage will be prolonged and serious lacerations are probable. Difficulties in rotation will be noticed because the form of the pelvic outlet prevents normal rotation. Pain weakness from the low position of the child in the lower uterine segment with its scanty musculature is also probable, especially in primaparæ. It is in cases of serious contraction of the outlet, however, that most difficulties arise.

As the case is not usually diagnosed until the first labor is well on nearly every variety of obstetric emergency and operation is met. The conditions are worst when the child is mature with an after-coming head.

In Ahlfield's 8 cases are found, 2 forceps operations, 1 perforation, 1 spontaneous premature labor, 2 artificial induction of premature labor, 2 labor stool. Greuser, craniotomy at outlet. Brummerstadt 2 cases, one stillborn, one saved with difficulty and mother died 36 hours later. Landau, 2 cases craniotomy. Jewett 1 case symphysiotomy. Newman 1 case symphysiotomy, mother died, child lived. Winterberg 1 case symphysiotomy, both lived. Klien reports:

Case 1.—Tub., 7.6 cm.; ant. post., 12 cm.; forceps after long tedious labor. Second stage, nine and one-half hours, laceration cervix, pressure necrosis in vagina; recovery. The head was easily configurable in this case.

Case 2.—Tub., 8 cm.; ant. post., 12.25 cm.; head four hours visible at outlet; forceps; good result.

Case 3.—Tub., 7.6 cm.; ant. post., 12 cm.; version and ext.; good results.

These cases, quoted in brief, serve to show the difficulties associated with labor in this variety of contracted pelvis. In all of Klien's cases the contraction was transverse only, antero-posterior diameter normal, which accounts for his results. Where the head is small and easily configurable, and this I regard as most important, the results are moderately satisfactory, especially if the space between the tuberosities and the sacrum is large enough to permit the passage of the head, but a very slight anomaly, such as a small protrusion of the ischiatic spines will disturb the entire mechanism and possibly cause death of mother or child, or both.

Another feature of this pelvis which has an important bearing on the severity of the labor, is the height of the lateral walls and the length and straitness of the sacrum.

Undoubtedly the long converging walls which are characteristic of the true "funnel pelvis" are the frequent cause of errors in rotation and position, which seriously complicate a condition already sufficiently grave.

PROGNOSIS.

Prognosis in general is not favorable in these cases, but the result depends on the degree and variety of contraction, and especially on the operation, which latter in turn depends on an accurate appreciation of the size and shape of the pelvis.

If left to Nature the soft parts experience deep crushing injuries, which in some cases expose the pubic rami besides producing fistulæ from the long compression. The extreme distention of the lower uterine segment may lead to uterine rupture. For the child the danger of asphyxia is greater than in other deformities, owing to the earlier escape from the uterine body. We find also the characteristic pressure marks appear on skull of babe and even fractures occur. The prognosis is most favorable where the fetal head is small and easily configurable and the outlet is contracted in one diameter only.

POSSIBLE OPERATIONS.

The measurements of the child's head in the present case demonstrate conclusively that its passage unreduced through the pelvis was impossible, and even if the head had been easily configurable, instead of hard and well ossified, I believe the birth of a living child could not be expected. These conditions could only result in a long, hard labor, with operative termination and doubtless a dead child.

In view of the strong desire of the parents for a living child the various operative procedures were carefully considered. The induction of premature labor naturally came first in point of time, and with the modern aids to the preservation of the child after birth, presented many hopeful features, but aside from the uncertainty of the date of conception there was continually in mind the imperfections and uncertainties of our means of determining the size of the fetal head, either by instrumental or external palpation and the necessity was urgent to determine not alone the size, but especially the form and consistency of the head, and as this could only be approximate at best, the success of the operation becomes highly problematical, even in cases where the time of conception is approximately known.

Besides this, the fetal mortality for many reasons is large, and shows, according to Krönig, a variation from 55 per cent. in the pelves showing the most contraction to 25 per cent. in pelves with c.v. between 9.5 to 10.5

cm. Consideration must be given also to the fact that premature children show a large mortality during the first year of life (from 19.5 per cent. to 28 per cent., as given by different authors), which directly or indirectly may be attributed to the prematurity, and the maternal mortality in these cases is from 1 to 2.2 per cent.[1]

Hence the chances seemed slight that a living child could be promised by this method, and it was rejected. The choice then rested between symphysiotomy and conservative cesarean section at term. The statistics give approximately the same mortality for each (2 to 10 per cent.), and a fetal mortality ranging from 15 to 25 per cent. in symphysiotomy as compared with 2.5 per cent to 5 per cent. in cesarean section, and in accordance with these conditions the cesarean operation was decided on as giving a maximum chance for a living child and a maximum of safety for the mother.

FUTURE PREGNANCIES.

The termination of this pregnancy has been in every sense satisfactory, but as the patient is only 21 years old and has the greater part of her sexual life before her, we must consider her future pregnancies. The moral question of sterilizing a woman by removal of the tubes or a portion thereof after the cesarean operation is still unsettled, but there seems to be no justification for depriving the woman of her ability to conceive and bear children when the mortality by the various operative procedures is so low. Both the cesarean operation and ventrofixation seem to lessen the chances of subsequent conception. But we can not rely on sterility, and it is probable that pregnancy will again occur. The adhesion of the uterus to the abdominal wall amounts to a ventrofixation and must be considered in reference to subsequent pregnancies. Abel reports several cases of abdominal adhesions after cesarean section where the operation was done two or three times on the same patient.

If the adhesions remain broad and firm (1/3 of the cases) the course of the pregnancy will be materially interfered with and expansion can occur only in breadth —the uterus can not rise toward the sternum—the axis will not correspond with the pelvic axis and malpresentations will occur, and abortion takes place in about 8 per cent. of the cases.

If pregnancy goes to term the risk of sepsis in subsequent operations will be diminished where the adhesions permit opening into the uterus *in situ* without entering the peritoneal cavity (Spencer). Usually these adhesions produce some stretching and tearing pains during subsequent menstruation, but inside of a year, or during the first half of the next pregnancy they disappear or remain only as long loose strings which cause no difficulty.

A review of the patient's first pregnancy and labor, in the light of our present knowledge, shows that the version and extraction was unwise; indeed, when the head is non-configurable version must not be attempted, for Klien's report demonstrates the aftercoming, non-configurable head is impossible of delivery in such a pelvis. Head-first labors give a possibility of delivery when the child is premature and head soft, and under such conditions version is permissible.

Either craniotomy or cesarean section should have been done, with a preference for the first, since she had been repeatedly examined, but there seems to be no valid reason against terminating all subsequent pregnancies in this patient by cesarean section.

BIBLIOGRAPHY.

Abel: Arch. of Gyn., 1900.
Ahlfeld: Lehrb. d. Geb.
Bauer: Ztsch. f. Geb. u. Gyn., 1898.
Champneys: Tr. Lond. Obs. Soc., vol. xxv.
Dobbin: Am. Jour. Obst., vol. xxxvi.
Dickinson: Am. Jour. Obst., 1901.
Fleischmann: Ztsch. f. Heilk., 1888.
Freund, W. A.: Gynakol. Klinik.
Fehling: Arch. f. Gyn., 1876.
Heyman: Arch. f. Gyn., 1899, Bd. lix, Heft. 2.
Klien: Volkman's Samuel Klin. Vortrag, 1896.
Krönig: Therap. beim. Engen Becken.
Prickards: Inaug. Diss., Mainz, 1897.
Reynolds: Tr. Am. Gyn. Soc., 1890.
Schroeder: Lehrb. d. Geb.
Schauta: Muller Handbuch.
Veit: Ztschr. f. Geb. u. Gyn., Bd. ix, 1883.
Williams: Obstetrics, vol. i.

THEORIES OF THE TRANSMISSION OF HEREDITARY SYPHILIS.*

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The fact of the heredity of syphilis was known to Paracelsus, who, in the year 1560, asserted that this disease was due to some unknown virus circulating in the blood, which also infests the semen and during conception is *transmitted with it to the fetus.*

Still, at the present time, we are not able to recognize positive laws as to the methods and conditions of the transmission of hereditary syphilis, and must fall back on theories based entirely on empirical conclusions. Until the specific micro-organism of syphilis is demonstrated scientifically and beyond doubt, these theories will never be more than probabilities—the more so as we find ourselves heavily handicapped in the attempt to make use of our clinical material. The protean nature of syphilis, where we might say that exceptions form the rule, the necessity to observe cases over periods of many years and finally our dependence on the history of at least three persons involved—an evidence which is none too free from objections as to its trustworthiness—all these factors make it difficult to arrive at satisfactory results.

We do know that syphilis is transmitted from the parents to the fetus. The questions which arise next are the following: 1. Which of the parents may be responsible for the transmission of the disease? 2. What are the ways and means by which the virus is transmitted? 3. What are the circumstances most favorable for the hereditary propagation of the disease?

The possibilities of a communication of the virus to the fetus are threefold: the generative organisms, the sperm cell or the ovum, or both, may contain the contagious substance a priori; the fetus may become infected through the maternal blood circulation; and finally, all these factors may act in combination. To determine how much is real in these different influences, to which the transmission of syphilis is attributed, we must take the problem to pieces and examine one after the other separately.

INFLUENCE OF THE FATHER.

The point whether syphilis can be conveyed to the child by the father alone, without infection of the mother, is a subject of much controversy. We shall now try to establish such a possibility on the basis of logical conclusions. To prove this supposition we must in the first place be able to exclude any participation of the mother, and for this reason be absolutely certain of her health. The mere absence of specific manifestations are not sufficient evidence of this. Cases have been reported by Lewis, Barthelemy and others where women, known to be syphilitic, remained entirely free from syphilis for a time up to fourteen years and yet continually gave birth to diseased children. A more confirmatory proof of absence of syphilis in the mother is likely to be found in such cases, where perfectly healthy children were born, when the syphilitic father underwent treatment, to be followed by diseased children, when treatment was suspended. The objections which have been brought forward against these records were that frequently treatment of the syphilitic father was not successful in procuring a healthy progeny unless the mother herself, who never exhibited any symptoms of the disease, has undergone specific treatment; but this seeming contradiction may be explained by the assumption that the mother was already infected either directly or through the placentar circulation by one of her first offsprings (the so-called *chock en retour*), and then participated in the transmission.

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[1] *Heyman: Arch. f. Gyn., Bd. lix, Heft. 2, 1899.*

* Read by invitation before the Rock Island County Medical Society.

An undeniable evidence of the absence of syphilis in the mother during conception and pregnancy would be the fact that she became infected with syphilis after the birth of her syphilitic child; it is known that people once syphilized become, with very few exceptions, immune against a new infection. But according to the law, which was first observed and recorded by Colles, these cases are extremely rare, and even then not distinguishable from reinfections and therefore impracticable for our argument. Baumes[1] and Colles[2] have first brought out the fact that mothers of syphilitic children are immune against syphilis; innumerable observations have shown that mothers nurse their syphilitic children with impunity, while wet nurses acquire chancres of the nipple, followed by specific manifestations. Caspary[3] went even further and inoculated a woman who had aborted a syphilitic fetus, but had always been free of any syphilitic symptoms, with the secretion of an active syphilitic lesion; the result was absolutely negative—the woman remained healthy. This immunity may be acquired in two ways: the mother may have been infected directly by her husband and the manifestations of syphilis were so mild that they were overlooked entirely, or the virus has been conveyed to her secondarily from the fetus through the placentar circulation. Finger[4] claims that the placenta acts as a perfect filter and wholly prevents the passage of solid particles of matter, but that the products of syphilitic infection are ptomains or toxins, which are soluble and may traverse in the interchange of placentar serum. This process does not necessarily render the mother syphilitic, but confers on her an immunity, an effect which would be the same as that of vaccination for immunization against smallpox.

Still another way to prove the spermatic transmission is by analogous evidence. Pasteur[5] discovered that the germs of the disease of silkworms, called "pebrin," pass into the spermatic cells of the worm, which still retain the power of germination, but simultaneously transmit the infection to the offspring. Similar experiments by Baumgarten have shown that the inoculation of chicken eggs with tubercle bacilli has resulted in the production of chickens with evidences of tuberculosis. All these observations prove that the infectious material may be communicated to the normal ovum by external agencies, including the semen, and result in a diseased product. We are certainly entitled to the belief that the same principle applies to the human organism.

While the majority of syphilographers shares this opinion, others, as Cullerier, Charrier, Parry and Notta, assert that the transmission of syphilis from the father to the child is impossible without participation of the mother. In evidence of this, they published many cases of recently acquired syphilis of the father where neither the wife nor children suffered from the disease. These records are not free of objections from unbiased investigators. Beside, if their view is correct, it would do away with the most probable explanation of immunization of the mother; that is, through the medium of the fetus. We would then have to ascribe the immunity of the mother in every case to a direct infection from her husband, and assume at the same time that this acquired syphilis had always run such an extraordinary mild course as to be overlooked entirely, a theory which does not appear very plausible.

The pathologic changes in the placenta may in time clear up some of the mooted points. Fränkel finds different conditions in the placenta, according to whether the disease has been conveyed by the father alone, the mother being healthy, or when the mother also is syphilitic. In the first case the placenta is affected along with the fetus, displaying a cellular granulation growth, complicated with obliteration of the blood vessels of the villi and marked thickening of the epithelium; in the second case not only the maternal and fetal parts of the placenta are involved, but the endometrium may also show a gummatous condition.

INFLUENCE OF THE MOTHER.

There is no doubt whatever that syphilis is transmitted from the mother to the child, while the father is and remains healthy. A woman suffering from syphilis may affect the fetus in two different ways, either directly through the vitiated ovum or by furnishing it during gestation with elements of nutrition imbued with the specific diathesis. Both these influences, or either one alone, may act if she had syphilis at the moment of conception. That the ovum alone may be responsible for the transmission is probable from the analogical action of the paternal procreative cell since we are justified to assume the same faculties for the female generative organism. If the mother contracted syphilis subsequently to fecundation, the transmission of the disease to the fetus could have been caused only through the placentar circulation. In all these cases the health of the father must be assured as proven by a later infection. An infection of the child during the passage through the birthways, which belongs in the class of acquired syphilis, can easily be excluded if pathologic lesions characteristic of hereditary syphilis are found.

The final conclusions as to the influence of either of the parents on the child could then be formulated from the above arguments as follows: 1. The father's sperm cell may contain the syphilitic virus and convey it to the child without participation of the mother. 2. The maternal generative cell may contain the virus and result directly in a diseased fetus. 3. The placentar circulation permits the passage of the infectious matter either way from mother to child, and vice versa. 4. Several or all of these factors may combine, and the more of them that are present the less probable the escape of the child. 5. The probabilities of the transmission of syphilis through the mother are greater because of more ways of possible influence on the fetus.

The next question to be considered is, what are the pre-existing circumstances and conditions most favorable for the transmission of hereditary syphilis? From our clinical experience we may positively assert that the probability of the appearance of hereditary syphilis is reversely proportionate, 1, to the time of infection of the parents, and 2, to the length and thoroughness of specific treatment. The nearer to the time of fecundation the infection of either parent took place the more certain is the disease to become evident in the child and the more malignant will be the type of its manifestations. Some writers claim that this applies mainly to the man in whom the syphilis, after a period of years, enters a state of latency and loses its contagiousness. It is no rare occurrence, however, they say, for a woman to give birth to a syphilitic child ten years and later after her infection; they explain this by reasoning that an ovum infected with the syphilitic germ may be retained in the ovaries for a long time before it is expelled and fertilized, while the spermatic cells are eliminated constantly, and with them the specific virus as long as it is present. The other influential factor is the effect of treatment. A judicious, methodical and sufficiently long-continued treatment of the syphilitic parent will, in many cases, result in a favorable fate for the offspring.

Another interesting question is: At what period of pregnancy may a woman become syphilitic without communicating the disease to the child? Ricord's belief that infection of the mother within the last three months of pregnancy does not affect the child, was generally accepted until cases were reported where syphilis, acquired by the mother as late as the eighth month of pregnancy, was transmitted to the child.

Can hereditary syphilis be transmitted to the second generation? To prove this we must have positive evidence, 1, of acquired syphilis of either, or of both, of the grandparents; 2, of hereditary syphilis in either of the parents with the absolute proof that no new syphilitic infection of the parents took place, and 3, of hereditary syphilis in the grandchildren. The difficulties attached to the task of acquiring a trustworthy history of a disease running through three generations, make the reliability of the reported cases very uncertain and do not, therefore, permit any correct deductions.

In conclusion I would like to add a few practical points which, in connection with this subject, may be of interest.

While the energetical treatment of syphilis will help a great deal to reduce the probability of its hereditary transmission, still the more important task of the physician is to prevent marriage at a time where the disease is still active and prone to be propagated. According to Kassowitz,[6] about 30 per cent. of syphilitic children die *in utero*, another 30 per cent. die within the first six months after birth, while the balance is still more reduced by diseases developed on a tainted system. As long as there is no absolute proof of a positive cure of syphilis, a thorough, systematic treatment of at least two years' duration and an absence of specific manifestations during three consecutive years should be made the condition *sine qua non* for the consummation of marriage.

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BIBLIOGRAPHY.

1. Baumès: Précis theorique et pratique de mal. ven., vol. 1, 1840, p. 180.
2. Colles: Pract. Observ. on the Vener. Dis., London, 1837, p. 285.
3. Caspary: Vierteljahr. für Derm. und Syph., 1875, p. 473.
4. Finger: Archiv für Derm. und Syph., 1890.
5. Pasteur: Monatshefte für pract. Derm., vol xx, 1895.
6. Kassowitz: Die Vererbung der Syphilis, Vienna, 1876.

Rashes appear in various diseases as follows: Typhoid, seventh to ninth day; typhus, fourth or fifth; smallpox and measles, third or fourth; scarlatina, first or second.—"Med. Summary."

THE TREATMENT OF LEPROSY.*

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Leprosy, that awe-inspiring scourge of the human race, stands to-day an unsolved problem awaiting a proper solution. It is the great riddle of the Sphinx which some unknown Œdipus may perhaps solve. From time immemorial it has engaged the attention of the most learned sages, philosophers and men of science, and it stands to-day as mysterious and as awful as it did at the beginning. It is the black and lowering cloud over humanity which even we, with our boasted scientific attainments, have not yet been able to dispel, and all our puny efforts have resulted in the same failures that the misdirected labors of our forebears did. It is the one problem before which every one must bow and acknowledge *non possum*. It is the most stubborn, as well as the most difficult with which to grapple, of the great triad, the two other members of which are tuberculosis and syphilis.

The great similarity to one another which these processes present has led to the idea wrongfully entertained by some that one was merely a different stage of the other; as, for instance, that leprosy is the quarternary stage of syphilis, when we know it to be a fact that the two diseases have no such close relationship; and so for tuberculosis. What we do know is, that all three are essentially chronic in character and insidious in their beginning. They are also essentially destructive in character and they all attack every tissue of the human organism. We further know that leprosy and tuberculosis present specific bacteria of the bacillus form, and the best investigators are of the opinion that syphilis also is characterized by a specific bacterium. It is also held to be most probable that the bacteria are not the direct causes of the diseases, but rather their toxins, a most reasonable view in consideration of the fact that serum therapy, based on this manner of considering the subject, has proven so successful.

There is another point of more than ordinary interest in this whole question, in view of the fact that it is the one of highest interest to the victim of any one of these diseases, which is, what is the proper treatment and is there a cure? In the case of syphilis we are positively assured by some that there is an absolute cure, whereas others deny it. A third class tells us that the disease cures itself spontaneously. It is certainly a difficult matter to decide such a question, especially when our methods for a final determination are so defective. So far as tuberculosis is concerned, we have given to us positive assurances that it can not only be cured, but that it has been in numerous instances. And yet, even here, some doubting investigators have more or less maliciously demonstrated some remains of undoubted tuberculous nature in certain of the reputed cured cases.

Quite different is it in the case of leprosy. A cure has not yet been claimed by a leprologist who knows the disease thoroughly. Marked improvements under certain forms of treatment have been noted, and no one has denied these; but a cure has only been suggested as possible under the treatment which has been employed. But of this I will speak later on in the course of this paper. What I purpose noting is the treatment of the disease, and this will, very naturally, give rise to a few remarks on subjects connected with it. I do not purpose speaking of the cure of leprosy, for this has not yet been discovered. The methods of study have been improved and we are daily making some steps which bring us nearer to the wished-for solution of this great problem. We can not say that it is impossible; we can only acknowledge that our methods are impotent.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and appro[illegible] publication [illegible] Drs. L. Duncar

The problem which confronts us is to devise, discover or formulate a successful method for the cure of leprosy. For its complete eradication perfect isolation is sufficient; for its cure we must have something equally as certain.

It is not proposed here to speak of all the methods of treatment of leprosy, for their name is legion, and the majority of them have fallen into ignominious desuetude. They have been tried and found wanting and have fallen into a merited oblivion. Many of these methods were based on superstition, the craft of magic, white or black, religious recitations, incantations, amulets, prayers, ex-votos, and the entire arsenal of the belief in the miraculous and outlandish. These are still practiced in districts remote from all the semblance of even the beginnings of civilization. And we have no doubt that certain creeds have followers to-day who believe or pretend to believe that they cure even leprosy by their prayers, which are really blasphemies in the eyes of those whose faith is pure and true. With all these we have nothing to do. What will be considered are medical measures and the success which has so far attended their exhibition; and of these but a few will be chosen and such as have proven of some value.

It may not be inopportune, before entering into a consideration of the different methods of treatment, to pass in short review some of the views which have been held in regard to the manner in which the disease is acquired. There are those who have invoked telluric influences, especially dampness, and yet the disease is seen to occur in places of such varying meteorologic conditions that this can not be considered as entering into the question any more than a hot or a cold climate. For leprosy is observed to occur in the torrid heat of India and in the glacial zone of Norway as an endemic disease. The theory that it occurs principally in those who live on the sea coast and, incidentally, chiefly in fish eaters, as has been advanced by Mr. Hutchinson, is not supported by facts, as is aptly proven by its occurrence in those who have never been near the sea and those who have never eaten fish, either from fresh or from salt waters. Then we have a cause which has been invoked, which has met much opposition and which has caused, as it is yet causing, much acrimonious discussion. Of course, you will immediately recognize this cause as contagion. The contagionists advance some very good arguments in support of their views, and the non-contagionists are not slow to adduce facts to prove their position. The most active among the latter is, beyond all doubt, Zambaco, who has made it the object of his life to endeavor to prove the non-contagiousness of leprosy. He makes a very strong plea for this view in his "Voyages parmi les lépreux," a small book full of very interesting matter, rendered doubly so from the fact that it is from the pen of a capable leprologist. That this question of contagion is anything but easy of solution is evidenced by the fact that the lepra conference held in Berlin did not pronounce itself definitely on the subject. Under these circumstances it has been considered the safest course to follow by both sides party to this discussion to agree on isolation as the best measure to pursue until something more definite is known concerning the nature of leprosy.

Another theory to account for the increase in leprosy, and it is one which has a number of adherents, is the one which makes the disease a hereditary one. This manner of thinking is one of the offshoots of the non-contagionists. They contend that, while lepers are, as a rule, sterile, they propagate to a sufficient extent to furnish a continually increasing number of lepers, and where the sexes are not separated the intermarriage or concubinage of lepers with non-leprous individuals inevitably results in the production of offspring which are lepers. And, as a further proof of heredity, is adduced the fact that the disease will skip a generation to appear in the succeeding one. It is this question of heredity which has led so many eminent leprologists to advocate a strict system of segregation, which, if carried out properly, is certainly destined to ultimately cause the disappearance of leprosy were it not for one factor which should be taken into consideration. This important factor is inoculation. No one denies the inoculability of leprosy, but all are not yet agreed on the method in which it occurs. The introduction of the bacillus of Hansen directly into the human tissues or through an intermediate host function has been proven to be possible. These bacteria have been found in the soil on which homes of lepers were built, and subsequently destroyed by fire for the purpose of destroying all possible causes of future infection. Mr. Impey of South Africa has successfully inoculated leprosy in some natives so that we may look on the inoculability of leprosy as a proven fact.

Now come certain students of leprosy who contend that the disease can not be inoculated except under certain conditions. They further contend that these conditions must be present, and, as a matter of fact, are usually present; all of which is yet a matter of *sub judice*. Many of these also sustain the thesis that there exists no such thing as cases of leprosy acquired through contagion, and that all are inoculated. Some very harassing discussions owe their origin to the proper interpretation of the terms contagion and inoculation, but this is neither the time nor the place to indulge in hair-splitting distinctions. That which concerns us more is a consideration of the conditions which are regarded as necessary to the acquiring of leprosy. In the first place, and regarded as the most important, is the existence of a predilection to the disease. This is considered a racial condition and accounts for the rapid dissemination and increase of leprosy among certain peoples or races. Of course, this is merely a theory which, unfortunately for its upholders, is not supported by facts. A short inquiry into its weak points may not be uninteresting. In this theory of predilection it has been found necessary to call in certain racial characteristics. Thus the Chinese, Japanese, Hindus and Sandwich Islanders were considered sufficient at first. Then it became necessary to add Norwegians and the Indians of the different North American countries, which very naturally led to the inclusion of the natives of the West Indies. This gradual accretion has finally resulted in the inclusion of all countries with the exception of nearly all the European states and of the United States. And yet we find that the natives of some of these become lepers, albeit purely Caucasian. The argument that these have traveled in countries where leprosy is endemic and lepers are common and thus acquired the disease by contagion will not hold. For cases are noted and I have seen some in which the disease was sporadic; in which the affected individuals not only never traveled where leprosy was ever observed, but had never seen or had any dealings with any one who might have a predilection for leprosy. It is true that such cases are few in number, but there are enough of them on record to prove a stumbling block in the road of those who spin fine theories out of very weak material. But it would certainly prove a wearisome task to take into consideration all the theories which have been advanced and examine into the validity of the arguments which are made to hold the various views which are announced. Enough has been said to give an idea of one of the many problems set before leprologists and of the difficulties which surrounds the task of arriving at a solution of any one of them. With these few preliminary remarks to introduce the subject I will now enter into a consideration, necessarily short, of the question of the treatment of leprosy; and, in this, I do not propose to give a complete and detailed account of all those which have been proposed and tried, but rather pass in review a few which have offered the most encouragement and seemed to be the most rational in their application as well as the best in the results obtained by means of them.

In speaking of the treatment of leprosy the first agent to which we naturally feel our attention called is chaulmoogra oil. It is perhaps the oldest one which has been employed in the treatment of leprosy, and even to-day it enjoys a reputation far superior to all others on account of the very good effects which have followed its use. Originally used in India, if we are to believe those who have written of it, it is still regarded there as the only medicinal agent of any worth in this disease. And it is not only in India, but in other countries as well that it enjoys this exalted reputation. Those who have had an opportunity of observing its action and its effects in a cold, deliberative manner, are also ready to accord to it the praise which it certainly deserves. But to attribute to it the power of curing which has been claimed for it none who has observed it is willing to concede. It is universally admitted as a fact that it will bring about improvement in a case of leprosy, but that it will cure is conceded by none. And it is right here that the function of the leprologist is called into active requisition. In a case of reputed cure he should examine it with all due regard and not jump at conclusions because external appearances of a general character are such as to lead to a mistaken idea that no leprosy exists. Every small symptom and sign must be carefully noted and the complete absence of all must be looked on as deceptive, for it must never be forgotten that while chaulmoogra oil improves much, it has never yet cured leprosy. And right here let me warn you in regard to the administration of this remedy. It is fairly well borne when given by the stomach, but the time inevitably arrives when the nausea and other untoward symptoms which this method produces force it to be administered hypodermically. This should be done at the very beginning, and the oil should be applied externally. In this manner much better results may be obtained, although the hope of a final cure by this means may be considered *nil*. We are well acquainted with the claims which have been made for this agent, but none has ever been substantiated in a manner that would prove satisfactory to one who has made this disease a study. In fact, the result has usually been the reverse. Not very long since a Chinese leper, who was quarantined on the grounds of the St. Louis Smallpox Hospital, was declared cured by the medical superintendent. Among those called to examine into the alleged cure was the reader, who unhesitatingly declared that the Chinaman was not cured of his leprosy, and he was ordered back to his isolation. He still presented some indubitable marks of the disease, and, in point of fact, was not cured. This opinion was shared in by the others who examined him.

It has ever been thus with cases declared cured by oil of chaulmoogra, and doubtless will be. One point to which attention should be called in connection with this agent is that in reputed cured cases there is always present the liability of a relapse into a form which will be more severe than the original one for which it was administered. This is an evil of more than ordinary importance, and it is on this account that those acquainted with the fact have hesitated about using this medication. Promises can not be safely made beyond a certain point, and a severe relapse is certainly very difficult to explain. The enthusiasm of one who has seen but a portion of the results is not sufficient to guarantee the hope of a final cure, and the experience of him who has not devoted years to the study of the subject and who has not had the opportunities of following any form of treatment can not be taken either as a positive proof or as a reasonable encouragement to adopt a method which has proven itself fallacious on so many occasions. Do not depend on oil of chaulmoogra even for a temporary improvement; it is better to resort to other methods.

You will no doubt find many advocates of this oil, and if you do, inquire into their experience and ask them for how many years did reputed cured cases remain cured. Everything in this matter must be carried on in a judicial manner, and the *ipse dixit* of no one can be accepted. Let not the wish be father of the thought, but consider only those things which are proven. We can not afford to jump at conclusions to-day; we can not even afford to accept what are but factitious proofs. The absence, supposed or absolute, of Hansen's bacillus is not always a positive proof of the absence of leprosy. Besides, in such a case, what proof is afforded that this self-same bacillus is not lurking in some tissue beyond the reach of the investigator? Who is it that will be enabled to examine every organ and every tissue of a living subject and who will take the pains to do so with a dead one? As you can plainly see, the honest investigator is seriously handicapped in an honest endeavor to determine whether a case of leprosy has been or has not been cured, no matter what treatment has been used. But, to briefly summarize the expressed opinions on the use of chaulmoogra oil in the treatment of leprosy, it may be stated that all investigators as well as leprologists are of the opinion that it has a rapid effect in the way of improving any case. Also, that it is best administered hypodermically; and, furthermore, that its discontinuance is attended by relapses of a more or less severe character. Furthermore, all are agreed that it can not be continued very long by the mouth. These are certainly not very encouraging conclusions, and would lead very few to the adoption of this agent in a country where the propriety of complete segregation is under consideration. In fact, it would lead to the use of other means which would encourage the hope of ultimately successfully obtaining a cure. This is the objective point of all leprologists, and will explain why all frown down any method which can not afford anything better than relief.

This treatment by means of chaulmoogra is purely empirical, and not based on any rational cause therefor; it was simply found to be good to produce an improvement in the symptoms of leprosy, and this led to its adoption in the treatment of the disease. And, up to the present, but little improvement has been made in its administration beyond that of employing the hypodermic method in lieu of that by the mouth. Naturally the former method has resulted in the advantage of its being possible to continue the remedy for a longer period of time without any untoward symptoms; but no better final effects have been observed. This is certainly demonstrative of the fact that the method does not repose on a rational therapeutic base, but is rather in the nature of a haphazard measure, in which a partial effect only is taken, and very illogically, as an indication of what the permanent result should be.

Another method to which I desire to allude is that which was inaugurated by P. G. Unna of Hamburg, and which was based on his pathologic findings. As is well known to all who are present, he claimed that lepra bacilla are aerobic and need oxygen in order to continue to exist. It matters but little whether these bacteria be distributed along the walls of blood vessels and lymphatic channels or whether they be located in the substance of cells. The theory which he promulgated was, in substance, to use such agents as are greedy for oxygen and by their aid deprive the bacteria of that on which they depend for existence. These agents he found in that class he has so well described—the reducing agents. He expected great things from ichthyol, and his results have been what I have found them to be: improving but not curing. I will not burden you with the details of his method and its modification. It is sufficient to state that it has never produced more than an improvement. It has never cured. That in which we are more particularly interested is the question of a treatment which will cure. The therapeutics of lepra is improving daily, and we can not rest satisfied with the dictum that it can not be cured, any more than we can be with the unproven assertions that certain methods which are prematurely lauded have effected such a result. It is, indeed, a burning question in view of the fact that so many cases of this disease exist and that it is apparently increasing the number of its victims. The only manner of successfully combating it is to cure, not to attempt to repress it. Attempts at repression are but too frequently futile and amount to nothing more than a *pis aller*. Segregation and complete isolation will dispose of the cases found and recognized, but can hardly prevent the development of new ones, which experience will lead to conceal themselves and thus encourage the formation of new foci from which lepra will be disseminated until it again assumes large proportions.

It may perhaps be best to merely mention some alleged cures for lepra which, unfortunately, have not yet been proven to be such. One which has been announced with a great flourish of trumpets by its originator is the treatment by means of the Carrasquilla serum. As has occurred in the introduction of all new methods in so-called incurable diseases, wonderful improvements were observed, and even apparent cures. As in all these cases the inventors were filled with the enthusiasm produced by the delight of having at least discovered a possible cure; and, as has been the fate of all, the ultimate results have been failures. Critical experiments made by competent observers have resulted in unfavorable verdicts, and the alleged wonderful cure has hardly lived long enough to be even a nine days' wonder. It has ever been thus with all these alleged cures for lepra. So many have the disappointments been that many who began with high hopes have become disheartened and merely plod along the beaten tracks of the past, which, at all events, offer some little modicum of satisfaction.

The latest treatment which it has been attempted to make a vogue is that by serpent's poison or the so-called antivenene method. Accidentally discovered and repeated later on with design, it was hailed with delight on account of the great improvement which was observed to follow its use. Great expectations followed the results which were obtained, but, like all its predecessors, it fell by the wayside and it failed to accomplish the much desired effect, that of producing a cure. Theories and hypotheses, numerous enough and sufficiently varied, were advanced to prove theoretically that it was the Hermetic stone of leprology. And it, too, failed. It were a loss of time and a trespass on your patience to recount all the will-o'-the-wisps of leprology. It would be sad to give naught but a catalogue of failures, and yet these are the monuments which line the highway along which leprologists have been traveling for many, many years. The fairy edifice of cure is as far away as ever and seems as difficult to reach as the foot of a rainbow.

The solution of the problem of the true treatment of leprosy is the one which now confronts us. It is one surrounded by difficulties as well as one fraught with the highest importance. It is the true solution of the whole lepra question which, unfortunately, has aroused but comparatively little attention from the governments of the civilized world. The number of those afflicted with lepra, the cost of maintaining those who are unable to earn a living and similar economic considerations are the only questions which have aroused any interest. Not enough attention has been given to the treatment of this scourge of humanity, and yet this is the paramount issue at the present time. This treatment must, of a necessity, be curative. After all has been said there can be no doubt whatever that the cure of lepra is the paramount issue. Leprologists, who are such in the true sense of the term, do not concern themselves much about the palliative treatment of the disease. This is certainly sufficiently well known not to require any further investigations. The methods now known and tried are sufficient for this purpose. A cure for leprosy has not yet been discovered, nor is it my purpose to announce one. The conditions which are offered in the problem are such that certain lines of investigation and experiment must necessarily be followed. The method in general which holds out the best promises of success is, beyond doubt, that based on serotherapy. This is, comparatively, still in its infancy, and yet it holds out many hopes for an extended usefulness. Roux and Behring have demonstrated the possibilities in the method by the results which have been obtained by the use of antitoxin. Among the conditions necessary to the production of a serum possessing specific properties is the production of a pure culture of the specific bacterium. In the next place, an animal who is immune to the particular disease for which a serum is to be obtained must be found. In the next place, this animal must be of a hardy nature and of a sound constitution when inoculated. Finally, the inoculations must be limited in number, as the serum becomes deteriorated in quality if the animal be inoculated and bled too many times or at intervals which are not sufficiently far apart.

A question of some importance which naturally suggests itself is, what animal would be the best to furnish the serum? In this question are involved many conditions; but, so far as present knowledge on the matter extends, there is little doubt that the male goat and the mule are the animals best adapted to the purpose, both on account of immunity and because their physique is refractory to nearly all the diseases of the capric and equine families. Of course, we have not yet arrived at that point when anything of a definite nature can be positively stated. A most vital corollary to the whole question is the one involved in the question as to whether, conceding a case has been effected, the cured individual is subject to or capable of being inoculated a second time by leprosy. In other words, does he then become immune to the disease and, if so, is the immunity a permanent one? Of course, this opens up anew the great question of immunity which will not be touched here.

The writer is fully aware that the entire subject of the treatment of leprosy has but been barely outlined in this paper, but it has been offered in the hope that some one will take it up and elaborate it completely and that it may call some little attention to the questions of a cure for leprosy. Now that the American possessions include a number of islands in which leprosy is endemic and cases exist in large numbers, it is certainly the duty of the American medical profession to devote more attention to this disease and to search for a cure with more diligence than it has done heretofore. Those physicians who are located in these possessions have ample opportunities to pursue their studies and make experiments such as are certainly not offered in this country. We perhaps do not hope in vain when we express the one that the opportunities offered will, in time, produce fruit of the highest value to all humanity.

DISCUSSION WILL APPEAR LATER.

ANATOMIC AND PHYSIOLOGIC CORRESPONDENCES OF CHILD AND ADULT.*

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I have made an endeavor in this paper to indicate a few salient points of correspondence between child and adult along anatomic and physiologic lines. The task is difficult because: (1) The similarity is so great between child and adult that it is practically impossible to draw a definite dividing-line between the two. (2) There are certain generally accepted adult qualities, such as judgment, discretion, physical and mental precosity inherent in some individuals universally recognized as children. (3) Some persons, adults to all external appearances and known as such among their fellows, have the mental and physical traits of childhood and youth.

This paper will deal in a brief way with: 1. Correspondences in temperature. 2. Correspondences in respiration. 3. Correspondences in circulation. 4. Correspondences in articulations. 5. Correspondences in accessory sinuses of the nose. 6. Correspondences in fetal vestiges. 7. Correspondences in emissary veins. 8. Correspondences in cerebral sensorial areas. 9. Correspondences in cerebral association centers (Fleschig).

I am indebted to J. S. Brown, M.D., of Chicago, for the following brief comparison of the infant and adult as regards temperature, respiration circulation and joint structures with clinical observations.

While in many minor points the infant and adult are nearly identical in their anatomy and physiology, it is essential to note certain differences: (*a*) For the benefit that may result to the infant from non-interference; (*b*) for the peace of mind which the attending physician may thereby secure.

TEMPERATURE.

The temperature in early infancy does not exhibit that stability seen in later life. Immediately after birth it is about the same as or perhaps a little higher than that of the mother. Under the influence of a bath and radiation from the skin it falls in the first few hours after birth from 1 to 3 F. Very soon it rises to 98.5 or 99 F., which figures practically persist during the succeeding months or even years. However, we must note that the infant will for a given cause show much greater variation in temperature than the adult, a circumstance readily accounted for when we consider the relatively greater radiating surface, the dilatability of the superficial capillaries, the thinness of their investments and the undeveloped state of the heat-regulating centers in children. It is a continuous high temperature, rather than a single abrupt elevation which lends significance to diseases of infancy.

RESPIRATION.

According to Uffelmann the rapidity of respiration during sleep is as follows:

At birth	35 per minute.
End of first year	27 per minute.
At two years	25 per minute.
At six years	22 per minute.
At twelve years	20 per minute.

To this I would append Kirk's statement:

> The number of respirations in a healthy adult person usually ranges from 14 to 18 per minute.

Holt, commenting on Uffelmann's statement, says:

> During waking hours this rate may be very materially increased, and from comparatively slight disturbance may be nearly twice as rapid. The type of respiration in infants is diaphragmatic, and it continues to be chiefly so until after the seventh year, when the costal element becomes more and more prominent. The rhythm of respiration is easily disturbed. In very young infants the regular rhythm is seen only in sleep. Regular rhythmical respiration is not fully established before the end of the second year. At times the infant's respiration may be carried on for a few moments almost entirely by one lung, and, indeed, it may also, in a brief time, change from superficial to deep breathing.

Cotton says:

> It has been demonstrated that young infants inhale more oxygen and exhale more carbon dioxid relatively than adults. The ratio of respiration to pulse in very young infants is so inconstant that it is of little value.

CIRCULATION.

Kirk's table on the force and frequency of the heart's action gives the following averages:

Before birth	150 per minute.
Just after birth	140 to 130 per minute.
During first year	130 to 115 per minute.
During second year	115 to 100 per minute.
During third year	100 to 90 per minute.
About seventh year	90 to 85 per minute.
About fourteenth year	85 to 80 per minute.
In adult age	80 to 70 per minute.
In old age	70 to 60 per minute.
In decrepitude	75 to 65 per minute.

Some persons preserve their youthful rate of heart action throughout life, but on the authority of Babcock not without pathologic causes, which, indeed, may be difficult or even impossible to discover.

On the authority of Cabot the following is the cellular constituency of the blood: At birth both the red and white corpuscles are considerably in excess of those in adult life. During the first day the red and white corpuscles increase markedly in number. At the end of the seventh day both the red and white corpuscles have been reduced; the red corpuscles are something near the adult figures, and the white to about 15,000 per mm.

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JOINT STRUCTURES.

In the articulation of the bones of the cranial vault sutures are absent, and in their place are fibrous septa continuous internally with the dura mater and externally with the pericranium. At the angles of the parietal bones are six fontanelles which gradually become filled by bone. Ankylosis of the sacral and coccygeal elements of the spine may be mentioned, this process in part being continued well on into adult lift. The diaphyseo-epiphyseal line of junction is of great practical interest, since growth in length in long bones takes place here. Separation of epiphysis from diaphysis, a condition difficult to diagnose from other traumatisms, may occur at this line. And, again, much of the pathology of bone tuberculosis is near this line of union. For evident reasons operations in children near the epiphyseal line should be avoided as much as possible.

ACCESSORY SINUSES OF THE NOSE.

The pneumatic bones of man are confined to the head. They contain, after childhood years, air cavities, variously called cells, sinuses and antra. The naming is founded rather on differences in size than on structural peculiarities, for they are similar in location, development, nutrition, function and liability to local and constitutional disorders. They are accessible from without, and on this fact depends doubtless the frequency of invasion by disease as well as the fine technic of their medical and surgical treatment.

The accessory sinuses are evaginations of the nose, hence their lining epithelial cells are of ectodermic origin. They partake of the nature of the nose because evaginated structures in general partake of the nature of the primitive cavity from which the evagination occurs.

The accessory sinuses occur in the frontal, ethmoidal, sphenoidal and maxillary bones. They are variable in size in different races, in people of the same race, and even in the same person; those of the two sides may differ in magnitude. In short, the sinuses admit of general, not of specific, limitations. Their openings into the nose are relatively larger in the young than in adults, and like other evagination routes, may occur doubly.

The sinuses are tardy in appearing and with no demonstrable reason develop *pari passu* with the generative organs. The completion of the sinuses is heralded by adult qualities of voice. At birth the frontal sinus is absent, the maxillary sinus is a shallow groove on the outer wall of the nose, the ethmoidal cells are shallow depressions and the sphenoidal bone has no traces of air cells.

The pterygoid plexus of veins is situated in the region of the pterygoid muscles and is composed of veins corresponding in name and number to the branches of the internal maxillary artery. This plexus is proportionately larger in children than in adults, and communicates with the cavernous sinus through the vein of Vesalius.

The empiric practice of counter irritation behind the ear, as well as in other regions of the scalp, finds anatomic justification in the emissary system.

In view of the large number and the large size of the emissary veins in children, diligence should be exercised on the part of both nurse and physician in preserving immaculate toilet of the scalp, since septic thrombi gain access to the dural sinuses, as previously pointed out.

Adults are more liable than children to infection of the dural sinus system by septic thrombi from the deep parts of the face. Children, on the other hand, are more liable than adults to epistaxis of cerebral origin, a fact attributable to greater *frailty* of emissary veins and greater constancy of a vein in the foramen cecum.

FETAL VESTIGES.

A number of structures in the embryo survive as vestiges in both child and adult. When their obliteration is complete, as often occurs, the very obliterating process itself is not infrequently a menace to the child's welfare. When the obliterating process is incomplete the survival of the structure may assume medical or surgical importance.

For our purpose let us define an anatomic vestige as a structure which, by virtue of loss of function, has become dispossessed of its specific characters as an anatomic entity. When a structure does not lose its specific qualities then, as a survival, it may acquire pathologic importance. The greater number of fetal vestiges belong to the digestive, circulatory and generative systems.

The embryonal yolk sac is attached to the ventral surface of the alimentary canal by a constricted neck—the vitelline duct. The somatopleure closes in around this duct, leaving the umbilical opening. The vitelline duct usually disappears. In some cases, however, it persists, being attached to the ileum from one to three feet distant from the ileo-cecal junction. When its existence coincides with an unclosed umbilical opening, a fecal fistula results. The persistent duct is called Meckel's diverticulum, and is usually from one to seven inches in length.

Meckel's diverticulum, in adults and children alike, may appear as a very small thread-like structure and still remain pervious. In abdominal operations necessitating invasion of this diminutive variety of Meckel's diverticulum, ligation should always precede its division, in order to avoid the possible escape into the peritoneal cavity of gas or other noxious intestinal contents.

The allantois supplants the yolk sac as an organ of respiration and nutrition. Its stalk passes through the umbilical opening. With the appearance of the placenta the allantois loses its primitive function, certain parts becoming vestigial while other portions assume entirely new functions.

The allantoic vessels become the umbilical vessels and are concerned in the placental aëration of the blood, forming integral parts of the umbilical cord. The intra-embryonal part of the allantois forms the urachus, urinary bladder, urethra of the female, cloaca in part, and the prostatic urethra of the male.

The urachus is usually impervious, still obliteration may fail to occur; when its obliteration occurs coincidentally with an unclosed umbilical opening a urinary fistula results.

The vessels of the placenta—the hypogastric arteries and the umbilical vein—pass through the umbilical opening and obtain in child and adult as subsequent lifelong disturbing factors. The urachus and remnants of the hypogastric arteries assist in delimiting the inguinal fossæ, hence they are causative factors in the determination of inguinal hernia.

The umbilical opening left by the closing in of the somatopleure transmits: 1. The vitelline duct, whose persistent Meckel's diverticulum may result in a fecal fistula. 2. The stalk of the allantois, whose persistent urachus may form a urinary fistula. 3. The hypogastric arteries, whose fibrous remnants are causative factors in inguinal hernia. 4. The umbilical vein, whose cord-like remnant forms the round ligament of the liver. Umbilical hernia may occur in child and adult.

The foramen ovale—the causative factor in "blue baby"—is an unclosed part of the inter-auricular septum. It persists until birth or shortly thereafter. Its ultimate closure may be a matter of weeks or months, or it may persist throughout life. In 200 bodies I found 20 instances in which it was possible to pass a broom straw through the unclosed foramen ovale, but in only three of this number was the opening large enough to be of antemortem importance.

The thyroid body is formed by a median and two lateral diverticula. The lateral diverticula arise from the sides of the fourth inner branchial cleft; the median diverticulum arises from the ventral wall of the pharynx, and extends downward in relation with the ventral surface of the trachea, forming the isthmus of the thyroid body. The proximal part of the course of this diverticulum lies in the conjunctional area of the tuberculum impar and the two symmetrical segments of the tongue. The foramen cecum on the dorsum of the tongue represents *the persistent part of the median diverticulum.* That portion of the diverticulum intervening between the foramen cecum and the isthmus of the thyroid is called the thyroglossal duct, and may persist as accessory thyroid glands and lingual duct.

EMISSARY VEINS.

The emissary veins are more constant in childhood than in adult life. They communicate intracranially with the dural sinuses, extracranially with deep and superficial veins of the face, scalp and neck. They have no valves, hence the direction of the current of blood in them at any given time depends on the relative character of intracranial and extracranial pressure.

The emissary veins pass through foramina in the bones of the cranium. In childhood, these foramina are constant; in adult life, however, some tend to disappear, and their veins become obliterated.

The emissary veins in erysipelas and suppurative diseases of the antrum of Highmore may transmit septic thrombi to the sinuses of the dura mater, in childhood as well as in adults. Epistaxis of cerebral origin frequently occurs in childhood and is due to rupture of an emissary vein passing from the superior longitudinal sinus of the dura mater through the foramen cecum to terminate in the venous capillaries of the mucous membrane of the nose.

The mastoid emissary vein is proportionately larger in the child than in the adult and its severance may cause troublesome and even dangerous hemorrhage in surgical operations in this locality.

The angular vein of the face communicates at the inner part of the orbit with the ophthalmic vein, and this latter opens into the cavernous sinus. This is a favorite route pursued by septic thrombi to the cavernous sinus in erysipelas about the root of the nose. The anatomic fact just mentioned regarding the angular vein accounts for the large size of this latter in intense cerebral congestion.

At birth the brain is relatively of large size. Its general form closely approximates that of the adult. The dura is tough, and its sinuses are in free communication with veins of the face, neck and scalp by means of rather numerous emissary veins. The pia mater is very delicate, a physical condition favoring traumatic cerebral hemorrhage at birth. The frontal lobe and the cerebellum are small. The sensorial areas are large, while the association centers of Fleschig are probably potential only.

SENSORIAL AREAS.

The sensorial areas are four in number. Each corresponds to a definite peripheral region of greater or less extent, and thus there is, as it were, a constant picture on the highly sensitized plate of the collective sensorial areas, projected by the terminal end organs of vision, hearing, smell and common sensation.

The retina corresponds to and projects a visual picture on the visual sensorial center in the cuneate lobe. The cochlea corresponds to and projects an auditory picture on the auditory center in the superior temporal convolution. The olfactory filaments correspond to and project an olfactory picture on the olfactory center in the anterior perforated space, trigonum olfactorium, uncus and collosal convolution. The nerve endings in skin, tendon, muscle, joint and viscera correspond to and project a picture on the somaesthetic area of the cortex—the largest and by all means the most important area, for in this all motor nerves originate and all nerves *of ordinary sensation end.*

According to Fleschig, two-thirds of the cerebral cortex is occupied by what he designates association centers, the remaining one-third being occupied by the sensorial areas previously enumerated. In very early childhood the sensorial areas are everything—the association centers are probably potential existences only. Later, with the dawn of intelligence and reason, the sensorial areas and association centers strive for cerebral supremacy.

The association centers are regarded as the part of the brain in which the higher intellectual functions are carried on, and they occupy considerable parts of the frontal, parietal, temporal and occipital lobes of the cerebrum. These centers are believed to exercise control over the sensorial areas. They are in abundant communication with the sensorial areas by association fibers, and thus receive from all parts of the body impressions which they are supposed to transform into consciousness and give definite form to impulses. The commendable product, then, of the association centers is mature judgment.

The association fibers acquire their sheaths of medulla and become functional only after education and intellectual effort have stimulated the different regions of the cortex to harmonious action. Different forces acting peripherally on retina, cochlea and sentiment surface are thus the stimuli of the sensorial areas. The result of cerebral stimulation, after having been transformed and unified by the association centers, is education. The manufactured product of the association centers, awaiting consignment and shipment, constitutes the visual, auditory, olfactory, muscular and other memories.

It would be illogical to assume that Nature, who delights in diversities, should dispose the sensorial areas and association centers with reference to child brain and adult brain according to a rule to which there could be no exceptions. Rather should there be overlapping or telescoping of the fields of the higher intellectual faculties in the adult brain and its juvenile prototype. In fact, observation would seem to confirm this view, and the investigations of Fleschig seem to point to its rational explanation in anomalous development of association centers.

Adult thought, application, acquisitiveness and mature judgment in a child is precocity. Inclination for childish things, destructive tendencies, extravagent expenditure of energy and resources, incommensurate with *physical strength and fortune respectively,* on the part of an adult, is evidence of an unbalanced mind. It must be assumed that as soon as all parts of the nervous system act in harmony—that is, as soon as the association fibers become invested by medullary sheaths—the brain is at its very best and, mechanically speaking, a perfect machine. If now we determine a table of doses of medicinal drugs capable of definite stimulation of sensorial areas, we shall have arrived at the proper dose for the healthiest human organism. Empiric practice has ascertained and recorded this table under the head of minimal doses. Let us also remember the table of adult doses of powerful drugs, and account anatomically for the great difference between infantile and adult toleration of drugs.

Instances are on record where minimal doses produced the most alarming toxic symptoms in adults, and rumor has it the cause of all this was an idiosyncrasy on the part of the patient. We are then driven to the conclusion that along with precocity and unbalanced mind should be recognized idiosyncrasy, a condition in which the adult sensorial centers have retained their pristine purity and responsitivity.

How are we to regard anatomically and physiologically a patient who, as experience shows, reacts only to heroic doses? In the same light in which we regard an engine which, when new, consumed ten tons of coal and two gallons of oil, but which, after twenty years' wear and tear, consumes a hundred tons of coal and twenty gallons of oil in a given time. What is the practical deduction regarding idiosyncrasy? Begin every new case on minimal doses, for who knows which patient may not be idiosyncratic. Herein lies the value of the family physician, for he knows the patient's peculiarities. The physician who has no time to understand the patient by confirming or disproving idiosyncrasy is a dangerous man to society and on a par with one who swears on skeletal evidences to sex, regardless of the scientific findings of the influence of contrary sexuality on the osseous system.

The precocious youth, the man of unbalanced mind, the idiosyncratic patient are victims of developmental processes. The first is not responsible for his scintillating wit, the second is not to be held accountable for his childish actions, the third should not be treated with indifference if he succumbs to a dose of medicine prescribed for his baby.

"When I became a man I put away childish things," were possibly as reliable a definition anatomically for man as jurisprudence can summon for insanity. Manhood can not be said to have begun until there is evidence of judgment, discretion and control of the impulses under trying circumstances; here childhood ceases; here have the association centers of Fleschig obtained a dominating influence over the sensorial areas.

979 Jackson Boulevard.

Glinical Reports.

SUTURE OF THE GREAT SCIATIC NERVE.

REPORT OF A CASE.*

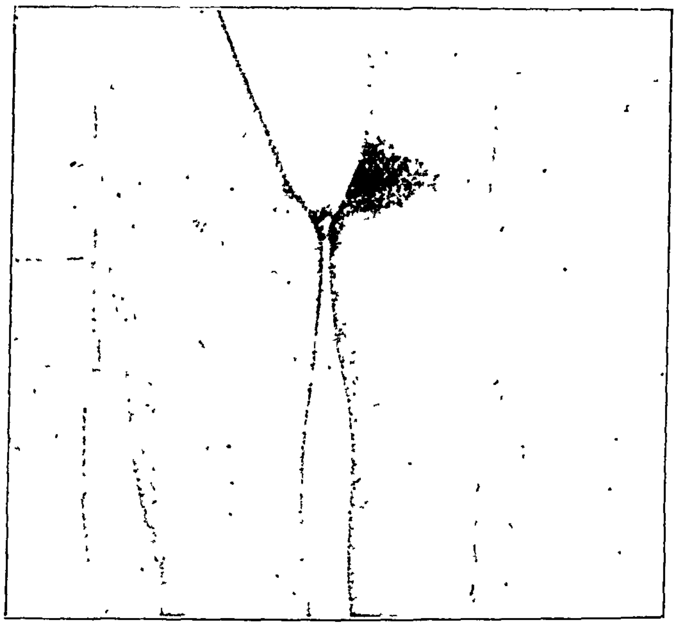
JAMES H. DUNN, M.D.
MINNEAPOLIS.

Wounds and suture of the great sciatic nerve are perhaps sufficiently rare to lend some interest to the following case:

J. S., an Irish farmer boy, aged 19, was struck by a scythe in the hands of a younger lad who was swinging the instrument on a level with his own waist. The lads were facing each other and the blade entered the outer side of the patient's left thigh, passed back of the femur, and the point emerged on the inner surface of the thigh just below the crotch. Between the points of entrance and exit the blade slipped under the skin and severed most of the muscles to the bone and divided the great sciatic nerve just below the gluteal fold. In removing the blade it was turned and the wound of entrance was slit downward some two or three inches.

The accident occurred July 18, 1898. Dr. J. B. White of Montgomery, some miles distant, was summoned hastily and found hemorrhage severe, and complete paralysis of motion and sensation in the sciatic distribution. He arrested the bleeding and dressed the leg as skilfully as possible, and on the next day brought him by rail to St. Mary's Hospital, where he arrived in the evening.

On the morning of July 20 we examined the patient together. Despite such antiseptic precautions as it had been possible to carry out at the scene of the accident, the wound was badly infected. After thorough cleansing I cut down on the nerve by the usual incision for stretching the sciatic at this point. (See illustration.) The severed ends were found retracted somewhat more than an inch. The ends were stretched, approximated and sutured by medium and fine catgut, three through-and-through sutures with the former and numerous sutures of the sheath with the latter. Several of the severed muscles were also sutured with catgut, and extensive drainage employed in all three of the wounds. The extremity was dressed and fixed in slight flexion. The wounds had all fully healed by August 20. A superficial slough the size of a dime on the posterior surface of the heel had appeared despite attempts to prevent pressure.



Scar of operation.

September 1 there had been decided improvement in sensation, possibly some motor improvement, and he was allowed about on crutches.

September 10 a rubber muscle was stretched from the toe of his shoe to a band below the knee, and he was sent to his home in the country. He wore the rubber muscle till the following May, at which time the improvement, both motor and sensory, was sufficient for him to resume his work as a farm laborer without any artificial appliances.

I had no opportunity to watch and record the progress of the case very accurately, but the patient reported by letter from time to time, indicating that some lesser improvement continued up to the end of two years, since which there is no perceptible change. That is to say, the improvement was progressively greater during the first year and tapered off, so to speak, during the second, when it ceased. The early decubitus healed quite promptly and never gave further trouble.

In the summer of 1901, I chanced in his neighborhood and went over to his place to see and examine him. I found him working in the hayfield. On taking off his rather dirty shoe and stocking I found he had a small perforating ulcer of the heel. This had come on during the past few weeks while working hard, and he thought it had been irritated by a wrinkle in the lining of his shoe. I secured a promise from him to visit me after his fall work was done, for a more complete examination than we could make in the field. In December, 1901, about three and one-half years after the accident, he appeared for examination, and Dr. W. A. Jones kindly examined him and made the following record for me: "There is some dulness of sensation in the external saphenous, external plantar and left half of the musculocutaneous, beginning at the ankle-joint region. Sensation above either nominal or slightly hyperasthenic; knee-jerk exaggerated in the left leg. Partial paralysis of the anterior tibial group only."

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* Read before the Hennepin County Medical Society, March 3, 1903.

The right thigh measures 48.5 cm., the left 46.5 cm. The right calf measures 34.5 cm., the left 33.5 cm.

I have recently seen the patient, and his present condition, four and one-half years after the operation, is practically the same as last year, the ulcer has not healed, though a slightly better care of it has kept it at about a standstill. I believe it would heal if he were to lay up and attend to it properly. He has never done so for more than two weeks, during which time it showed improvement. It is a wonder to me that working as he does with dirty stockings and shoes, it has not proven more destructive and malignant.

The conditions for successful nerve suture were not good. The wound was forty-eight hours old, and badly infected. Prolonged drainage was necessary. The result is a perfect restoration of function, excepting decided paresis of anterior tibial group of muscles and consequent loss in extension of the foot, which, however, does not much interfere with his gait. Sensation is nowhere entirely lost, but slightly diminished on outer aspect of the leg, and quite decidedly so on the outer dorsal aspect of the foot. Trophic disturbance is indicated only by the characteristic perforating ulcer on the heel, which is about the size of a dime, very deep, reaching almost to the bone, and very indolent. The secondary factors of traumatism, infection and neglect, have been allowed full sway.

It has been a question in my mind whether it might not have been better to have first drained the wound, stamped out the infection and have made a secondary nerve suture, but I think not. The result is, I imagine, about an average good one. In the larger nerves some loss of function, especially motor or trophic, is, I believe, the rule.

A CASE OF RODENT ULCER.

J. C. O'DAY, M.D.

OIL CITY, PA.

The following case of ulcus rodens I believe is worth reporting, because of the extensive destruction to the face and the compatibility of a fair degree of health extending over a period of ten years. The history of the case is substantially as follows:

The patient is a male, aged 56, married, father of five children living and well. The family history is negative. The personal history is negative, except that prior to the onset of ulcer patient drank considerably.

Sixteen years ago a small pimple appeared over the right eye, becoming pustular and painful. The patient consulted a physician, who opened it with a needle, allowing the pus to escape. The margin now began to break down until the eyelid was threatened. Every effort of the physician to arrest the destructive character of the disease not only proved fruitless but seemed to aggravate it.

The patient, now thoroughly alarmed, sought the advice of several eminent surgeons of New York and Philadelphia, but in spite of every effort the disease progressed steadily, attacking skin, muscle, bone, eyes, nerves and all structures of the face. This continued six years, when the destructive tendency ceased. For the past ten years it has remained in about the same condition.

Examination shows the complete loss of the superior maxillæ, including all the soft structures up to the horizontal portion of the frontal bone. The tongue and remnant of the upper lip remain. In eating, he has his food minced and made into gruel with milk. This, with the aid of a spoon, he throws back on the base of the tongue, and it is readily swallowed. Words of the full vowel sound he utters distinctly, but with a peculiar horn-like pitch. He writes readily with slate and pencil, and in this way makes his wants known.

DR. GARCELON'S NINETIETH BIRTHDAY.

ITS CELEBRATION A PLEASANT FEATURE OF THE NEW ORLEANS SESSION.

Dr. Alonzo Garcelon, who is perhaps the oldest member of the Association, celebrated his ninetieth birthday at New Orleans May 6. Through the suggestion of Dr. L. Duncan Bulkley of New York, which was warmly seconded by others, Dr. Garcelon's birthday was not allowed to pass without a suitable memento from his many friends who were gathered at New Orleans. Over one hundred members each contributed one dollar, with which a loving cup was purchased. Subscriptions were limited to a dollar, so as to give a large number an opportunity to take part.

The presentation was a surprise to Dr. Garcelon; he had been informed that a few friends would come in, but he was not prepared for the surprise that awaited him. The loving cup was a beautiful present, on which was inscribed the following:

TO ALONZO GARCELON, M.D., ON HIS NINETIETH BIRTHDAY. IN LOVING REMEMBRANCE FROM SOME OF HIS FRIENDS IN THE AMERICAN MEDICAL ASSOCIATION, NEW ORLEANS, 1903.

Speeches were made by Drs. Bulkley, Lawrence, Bonifield, Gordon, Holton, Carstens, Montgomery, Marcy and others. They spoke of their great love for Dr. Garcelon and their pleasure in having him at the Association session. They held up Dr. Garcelon as a model medical practitioner, and likened him to a tall, native pine tree, standing sturdily as a monarch of the forest.

Dr. Garcelon, in his response, spoke very appreciatively of the favor shown him, and added a few words about the difference in medical conditions between his early days and the present.

After this enjoyable presentation a second took place. A handsome gold-headed cane was given to the former member of that body by the Board of Trustees, together with the Secretary and Treasurer of the Association. The inscription on the cane was:

DR. GARCELON. FROM THE MEMBERS OF THE BOARD OF TRUSTEES OF THE A. M. A., MAY 6, 1903.

Dr. T. J. Happel, chairman, made the presentation. He reviewed Dr. Garcelon's long career as a Trustee, and spoke in appreciation of the untiring labors he had performed and the great interest he always took in watching over the affairs of the Association and of THE JOURNAL.

Dr. Garcelon, in accepting the cane, said that with the permission of Providence he hoped he would have the pleasure of greeting the members of the Board of Trustees and of the Association many years more.

This event was a very pleasant feature of the visit to New Orleans for all those who took part. Dr. Garcelon is worthy of these honors and of many more, and the realization of this made the speeches very hearty and lent emphasis to all the eulogies.

Population Statistics in Germany.—The official figures for 1901 have just been published and are quoted in the "Allg. Med. Ct.-Ztg." for April 25. The proportion of births was 42.31 per 1,000 inhabitants in 1875, and has since been gradually declining to 36.79 in 1900, but in 1901 shows a slight rise to 36.89. The number of illegitimate births is the lowest for thirty years, 8.57, and in the manufacturing district of Westphalia only 2.60. The number of stillborn infants is also the lowest for many years, 3.13. During 1901 there were born in all 2,097,838, the proportion of girls to boys being 100 to 106.1. There were 26,127 twin births, 241 triplets and one case of quadruplets.

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SATURDAY, MAY 16, 1903.

THE NEW ORLEANS SESSION.

The session of the American Medical Association just closed has been a success in every respect. The New Orleans arrangements were almost perfect, the general hospitality and feeling was most admirable, and the social functions passed off with delight to all. The Section meetings were above the average in the quality of the papers and the interest in the discussions; the business meetings disposed of matters which have long been a trouble to the profession. The President's Address and the orations have already been placed before our readers and need no comment. The attendance was far beyond expectations, and made it one of the largest sessions that the Association has ever held. The general spirit throughout was excellent, and we may say, altogether, that perhaps there has been no session that will leave pleasanter memories with those who attended it.

THE NECESSITY FOR REORGANIZATION OF OUR LARGE HOSPITAL SERVICES.

There is a well-known popular distrust of public hospitals—a distrust not always intelligent, certainly, and not always deserved. On the other hand, there are reasons for the failures of the great public hospitals which are not understood by the laity, though only too clear to the profession. From time to time, at more or less regular intervals, attention has been called through the public press to various irregularities, if not abuses, in the conduct of the public hospitals of our large cities. One point which is occasionally emphasized is the insubordination of internes, who have been especially charged with performing major operations, etc., in violation of long-established rules. According to the rules of the majority of such hospitals all surgical work, except minor emergency operations, must be performed, not by internes, but by a member of the staff, and internes are prohibited from administering anesthetics except under the supervision of some member of the staff.

This is excellent, but the truth is that too many of the public hospitals of this country suffer from a general lack of medical organization, and however sternly abuses may be dealt with, they will persist or recur so long as the present loose methods of hospital organization are continued. Many of these hospitals have at their head lay wardens or governors, who can not be expected to exercise authority in medical matters over attending men or internes. The visiting staff usually consists of a large number of physicians, appointed by the favor of the board of trustees, or of the president of the board. It consists in part of the most eminent physicians in town, who bestow on the hospital but little personal presence, and for the rest, of men who have eagerly sought these appointments for the prestige they could gain and whose presence in the wards is of doubtful value to the patients, and certainly fails to inspire the internes with respect. As this great unsalaried staff can not be held to strict service rules, the care of the patients actually devolves on the internes, who are brilliant young fellows, usually selected by severe competitive examination, but who too frequently cherish the delusion that they learn best by experimentation, untrammeled by the directions or interference of their elders.

Instead of welcoming the opportunity for receiving instruction afforded by the visits of attending men, the average interne resents their advice as an infringement of his rights. Superficially such hospitals are often spoken of as giving the best training to the interne. In fact, from a sternly scientific point of view, and quite without regard to the mere humanitarian considerations, this is a fallacy. No one would take a young man just graduated from a technical school and put him in charge of a great electrical manufacturing plant. Yet we take young men, fresh from a medical school, whose practical experience has been almost *nil*, and place them in sole charge of hospitals in which, the twenty-four hours round, desperate accident cases demand instant action, obscure ailments require the utmost diagnostic skill and operations involving life and death must be constantly performed. Does any one seriously believe that the young physicians, who in fact do a large part of this work alone and unguided, learn so much as they would under intelligent supervision? This state of affairs is known and deplored by the profession. The general public, however, which furnishes the material for these hospitals, does not know it, but is dazzled by the distinguished names at the head of the list of "attending men," and fancies them actually in charge.

Our large public hospitals need to be reorganized. They require a competent, specially trained physician as superintendent, whose appointment and tenure depend only on his efficiency and good faith, a small salaried, permanent medical and surgical staff, whose members can be held to responsible service and who will thus give the internes the instruction and discipline which is their due, and will secure to the patients the best possible care. The hospital services should be organized into definite and well-defined departments, each with its head, an adequate corps of assistants and residents.

In the majority of our large hospitals the term of service of an interne is nearly two years. By shortening this term to one year twice as many persons would be granted the opportunities for clinical experience that is offered to internes and which the fierce competition shows is valued most highly, and rightly so. The appointment of more permanent resident physicians and surgeons, as is now done in the best hospitals at home and abroad, would more than compensate for the more frequent change in the internes, and would give us properly trained men for the higher positions in the hospital services.

The time is unquestionably ripe for a vital change in many public hospitals if they are to fulfill their function as training ground for young physicians, and if they are to retain the confidence of laity and profession, which is their due. Nor should the task be very difficult. If the members of the staff are allowed their proper privilege of bedside clinics and are assured a reasonable tenure of office there will be no difficulty in securing the faithful service of the best men in the profession for the wards of our public hospitals.

FLIES AND TYPHOID FEVER.

The paper we published[1] a few weeks ago on "The Fly as a Carrier of Typhoid" acquires special emphasis in the light of two researches that have since been published in European journals. Levy and Kayser[2] have just reported some interesting observations on the duration of life of typhoid bacilli in stools that had not been disinfected, but had been thrown into a privy vault in the ordinary household routine. From such material they recovered a micro-organism which responded to all the usual cultural tests for the typhoid bacillus and agglutinated macroscopically with typhoid serum in a dilution of 1/5000. The feature that lends particular interest to this observation is that the full history of the infectious material was secured. In this instance the feces of a typhoid patient were first thrown, without disinfection, into a cemented vault and remained there during five winter months. The contents of the vault were then spread on the soil of a garden, and after the material had lain in this situation for fifteen days at winter temperature, the investigators succeeded in cultivating from the garden soil true typhoid bacilli. The authors call special attention to the fact, shown by this observation, that the contents of privy vaults containing typhoid bacilli may continue dangerous even after the lapse of months.

On the experimental side of the same question, particular interest attaches to an article by Ficker from the Hygienic Institute of the University of Berlin.[3] This investigator, after noting the fact that he had previously isolated typhoid bacilli from the bodies of flies caught in a house where eight cases of typhoid had occurred, proceeds to describe some interesting experiments made to determine the length of life of typhoid bacilli in or on bodies of flies that had been fed with infectious material. As a result of these experiments it appears that flies fed with typhoid bacilli are able to convey the microbes to objects with which they may come in contact for as long as twenty-three days after the feeding. Ficker's attempts to determine the region of the body in which the bacilli were located did not lead to altogether conclusive results, although he succeeded in isolating bacilli from the head, from the wings and from the legs in five days, and from the intestine nine days after feeding.

The independent investigations of these several authors will certainly tend to increase the suspicion with which the wanderings of the house fly are coming to be regarded. The protracted vitality of the typhoid bacillus in privy vaults, the long period during which the fly itself is capable of disseminating infection and the rapidly accumulating epidemiologic evidence all point to the importance of a source of infection, the very existence of which has until lately been insufficiently recognized.

LIVER SPOTS AND THEIR SIGNIFICANCE.

The popular name for certain yellowish or brownish yellow patches variously located in the skin has long been liver spots. Old school physicians have, as a rule, agreed with their patients as regards the designation of liver spots, though the newer school of physicians have been very much inclined to doubt the possibility of any connection between the liver and these localized pigmentations, and some have even deemed such connection entirely out of the question. In recent years much has been learned of their true character. When limited to the eyelids the patches of chamois or wash-leather appearance so familiar to the practitioner, have been called xanthelasmata. Other yellowish patches variously distributed over the body usually associated with some increase of the fibrous tissue of the corium, with some fatty degeneration of the overgrowth, and therefore deserving to have a hint of their tumorous character in their name, have been called xanthomata.

Under their new and ambitious names these patches seem to have lost much of their interest for the general practitioner, but undeservedly so, for they are a constitutional rather than a purely dermatic condition. A recent publication of the New Sydenham Society by Jonathan Hutchinson,[1] bears the significant title "Xanthelasma and Xanthoma, with Special Reference to Their Association with Functional and Organic Diseases of the Liver." Dr. Hutchinson has shown by the investigation of a number of cases that the coloring matter in the yellow fatty patches, known as xanthomata, is undoubtedly of liver origin. Not infrequently the spots are associated with jaundice or with some functional liver disturbance. Occasionally crystalline accumulations occur just over them in the skin, due to the precipitation of cholestearin which may persist for some time, or be reabsorbed.

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[1] Feb. 28, 1903, p. 576.

[2] Centralbl. f. Bakt., Originale 1, March 20, 1903, p. 489.

[3] Arch. f. Hyg., 1903, xlvi, p. 274.

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[1] An atlas of illustrations of clinical medicine, surgery and pathology, compiled for the New Sydenham Society, Fasciculus xv., London, the New Sydenham Society, 1902.

Their occurrence should always lead one to examine carefully the condition of the patient's liver. The individuals who most frequently present "liver spots" are, in Dr. Hutchinson's experience, the so-called bilious subjects in whom functional liver disturbances are usually demonstrable without difficulty. The skin and hepatic conditions are frequently associated with severe headaches and migraine. Generalized xanthoma occurs, especially in diabetic subjects, and would seem to furnish some confirmation of the ideas of those who insist that the liver has a special function with regard to the metabolism of sugar in the system, which function is disturbed in diabetic patients.

Recurring liver disturbance, as Dr. Hutchinson points out, is prone to produce more or less significant changes in the eyelids. Three forms of palpebral skin alterations have been especially noted in this regard: First, a distinct pigmentation, more or less persistent, but prone to temporary increase in those parts of the eyelids now known as xanthelasma positions, that is especially around the inner canthus on the upper or lower lid. Second, the development of grouped comedones in these same positions with tendencies to subsequent pigmentations. Third, patches of yellow fatty deposit which constitute true xanthelasma. The old tradition of liver spots then and the associated etiology and significance are, it would seem, in spite of doubts in the matter, to be accepted and substantiated by twentieth century medicine.

ILLINOIS NURSES' BILL VETOED.

Among the governor's vetoes which have been announced is one by Governor Yates of Illinois, who has vetoed the trained nurses' registration bill; simply, as it appears, on the ground that the examining board was to be appointed from names selected by the Illinois State Medical Society. The governor objects to this as taking from the executive his prerogative, and, we might add, political perquisites. Why otherwise he should object to the assistance of a qualified organization in the selection of persons for a purely professional function is a little difficult to see from our point of view, though probably clear enough from his.

THE GERMAN REVOLT AGAINST CONTRACT PRACTICE.

The evils of contract practice and the extent to which the exploitation of doctors by workingmen's benefit societies has gone in some parts of the world are shown by a recent statement that a general action is going to be taken by the profession in Germany against employment by these sick-fund societies. In Germany, as in Great Britain, these societies have brought the average cost per call down to a ridiculously small amount. In the former country the average compensation per call is said to be only 4 cents. At Gera and Mülhausen the physicians have already refused to act for the societies, and in consequence these associations are obliged to pay the ordinary fees. Feeling is high, and at least one duel has been the result of the condition of affairs. We believe our brethren in Germany are in the right. We do not care to call the thing a strike, for this does not seem to be properly its name, though it has a resemblance to that movement so popular in this country at the present time. In England the same difficulties have been felt for a considerable time, and it will not be surprising if a general action similar to that of the physicians in Germany should be inaugurated there. In either case our confrères will have our best wishes for their success.

THE APPLICATION OF THE BIOLOGIC TEST FOR SPECIES TO BONES.

The above caption may suggest to those who remember the famous Luetgert murder case in Chicago, that it might have been possible to determine whether the boiled and alkali-eaten bones found in the vat were of human or animal origin. Experiments which Schütz[1] has been carrying out go to show that this differentiation could probably not have been made by the serum precipitation test of Wasserman. It is possible to determine the specific identity of bone only when a sufficient amount of albuminous material is attached to it, either in the marrow or in accidentally adhering muscles. For example, one wishes to know if a certain bone belongs to species A. An animal is immunized with the serum of a member of species A; an extract is then made of the bone in question, to get into solution albuminous bodies present in the marrow or adhering muscles. It is rather indifferent whether the material is fresh or dried. The extract is filtered and to the filtrate is added serum from the immunized animal. The occurrence of a precipitate indicates that the bone was from species A; if no precipitate, it was from some species other than A. Obviously bones in which the organic matter has been destroyed would be unsuited to the test. Schütz properly emphasizes the limited medicolegal value of this application of the precipitation test.

TYPHOID ON THE PACIFIC COAST.

The recent epidemic of typhoid at Palo Alto, the site of Leland Stanford, Jr., University, has excited some attention, but fortunately it appears to be associated with a very small mortality. Unlike the Ithaca epidemic it had no connection with the remissness of local authorities as regards water supply, and seems to have been entirely traced to one or two infected dairies. The comparative mildness of the epidemic as opposed to that of Ithaca is noteworthy, and in this connection we would remark on an editorial discussion of the subject in the *Medical Sentinel* for April, which antedated the Palo Alto epidemic. The editor finds from his observation and that of others that, while the disease is most unnecessarily and disgracefully present on the Pacific coast, the general mortality from typhoid is low, especially in Oregon, where his experience allows him to speak most authoritatively. There is a decided difference in this respect from the disease in the eastern states, though east of the Cascade range in the eastern portion of Oregon and Washington territory the condition is not the same. He has seen there several cases approaching the old typical typhoid of the eastern states, and the mortality appears, from such information as he has been able to obtain, distinctly higher than in the western part of the state. It would be especially interesting to know whether this same contrast prevails between eastern and western Washington. Whatever may be the cause of this difference, it has nothing to do with the locality of the bacillus. It is just as ready to defile the water supplies or to spread in other ways as in other sections of the country, but he suggests that some difference in the soil or water, while allowing it to grow and spread, diminishes its virulence, possibly by reducing its vitality from the onset. One possible cause is suggested, that is, the cooler temperature of the soil and ground water in Oregon, which is shown by the fact that in excavations almost anywhere eighteen or twenty inches below the surface, a temperature can be obtained at which butter remains firm and cream sweet all through the summer. Whatever may be the value of this fact as an explanation, the study is an interesting one and would indicate that the virulence of the typhoid bacillus is distinctly diminished in Oregon, and presumably in Washington and northern California. The subject is worthy of further careful investigation.

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[1] Deutsche Med. Wochenschrift, 1903, p. 62.

Marriages.

Albert L. Stuttle, M.D., to Miss Pearl Jones, both of Williamsville, Ill., April 29.

Walter N. Miner, M.D., Calais, Me., to Miss Estella Delahay, at Baltimore, April 29.

Nathan Porter Colwell, M.D., to Miss Agnes Louise Peterson, both of Chicago, May 5.

James M. Anders, M.D., Philadelphia, to Miss Margaret Wunderlich, at Ardmore, Pa., April 29.

Martin H. Fischer, M.D., Berkeley, Cal., to Miss Charlotte Leonard of Chicago, May 6.

John Calvin Young, M.D., Roanoke, Ill., to Miss Elizabeth May Monser of Wenona, Ill., May 6.

Louis M. Friedrich, M.D., Hobart, Ind., to Miss Minnie Batterman of Chicago Heights, Ill.

Gustave Adolph Thiede, M.D., Baltimore, to Miss Mary MacCreager of Walkersville, Md., April 30.

Deaths.

Edwin Ellis, M.D. University of the City of New York, 1846, died at his home in Ashland, Wis., from paralysis, after an illness of a few hours, May 3, aged 78. Dr. Ellis was a pioneer of Northern Wisconsin, and was known as the "father of Ashland." He had seen the city grow from the primeval forest to its present magnitude, and was closely allied with every good feature of its growth, more especially with the school system. On account of his death the city offices and public schools of Ashland were closed on the day of his funeral.

James Conland, M.D. University of Vermont, Burlington, 1878, died at his home in Brattleboro, Vt., from nervous exhaustion, May 2, aged 52. He was a member of the state tuberculosis commission, and had served two terms in the state legislature. He was best known as the most intimate friend in the United States of Rudyard Kipling.

Eben J. Cutler, M.D. Cleveland Medical College, 1866, lecturer on surgical pathology and minor surgery in that institution; for two terms a member of the health board, and once police commissioner, died at his home in Cleveland, April 28, from pneumonia, after an illness of one week, aged 65.

Lucius C. Herrick, M.D. University of Vermont, Burlington, 1864, assistant surgeon in the Fourth U. S. Colored Cavalry in the Civil War, secretary of the Old Northwest Genealogical Society, died at his home in Cleveland, Ohio, April 30, after an illness of five days from gastritis, aged 63.

William Holbrook, M.D. New York University, 1848, surgeon throughout the Civil War; a member of the legislature in 1882, and Medical Examiner for East Hampden since 1877, died at his home in Palmer, Mass., from disease of the stomach of long standing, April 27, aged 79.

DR. JOHN HENRY MUSSER.

THE NEWLY ELECTED PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.

Dr. Musser is one of a group of able young men whom the late Prof. Wm. Pepper gathered around him in the University of Pennsylvania—a group notable for ability, means and social standing; a group which Professor Pepper brought up in his own line of teaching, making them consummate diagnosticians and clinicians of unusual ability.

Dr. Musser was graduated from the University of Pennsylvania in 1877. He immediately started in practice in West Philadelphia, one of the poorer districts of the city, and soon built up an enormous practice. After a few years he associated himself in practice with his uncle, on the West Side, and on the death of his uncle succeeded to his extensive practice. During this time he gradually associated himself with his alma mater, beginning as instructor in medicine, his colleagues being Drs. Alfred Stengel, John K. Mitchell and the late Frederick A. Packard.

On the death of Professor Pepper Drs. Musser and Stengel were made professors of clinical medicine in the university, and Dr. Packard was made a trustee.

Later on Dr. Musser moved down town, and now has perhaps the largest family and consultation practice in Philadelphia. He has been physician to the Philadelphia and Presbyterian hospitals, and for many years a member and formerly president of the Philadelphia Pathological Society. He is one of the most modest and unassuming of men, but is surpassed by none in Philadelphia as a diagnostician and clinician.

Beside being the author and editor of standard works like his treatise on diagnosis, which is almost universally known to the profession, Dr. Musser has been for the last twenty years a contributor to periodical medical literature, both in this country and in Great Britain. His wide experience and clinical acumen have contributed a large amount of very interesting matter scattered through various journals which, if collected, would make volumes.

AMERICAN MEDICAL ASSOCIATION.

Proceedings of the Fifty-fourth Annual Session, held at New Orleans, May 5, 6, 7 and 8, 1903.

GENERAL MEETINGS.

Official Minutes.

May 5—First General Meeting.

The Association met at 11 a. m. in the Tulane Theater, and was called to order by the President, Dr. Frank Billings of Chicago.

Prayer was offered by the Rev. H. G. Davis, New Orleans.

Address of Welcome to the City by the Mayor.

Hon. Paul Capdevielle, mayor of New Orleans, was introduced, and delivered the following address of welcome:

Mr. President, Ladies and Gentlemen of the American Medical Association:

Only a few days ago I said to the Convention of American Manufacturers that, although many onerous duties were put on the mayor of a town like this, that of welcoming them to New Orleans was one which gave me nothing but pleasure.

The same idea occurs to me as I stand up before the body of learned and scientific men here assembled to-day. I owe it to the profession to add that except for the skill and devotion of the surgeons and physicians who came to my relief in a recent illness of the most serious character I would not have enjoyed the opportunity of meeting you on the present occasion.

The city of New Orleans is, and has always been, proud of its medical men. It has been the seat for many years of a medical college of the highest reputation.

The state of Louisiana, as its first and largest charity, has supported a great hospital in our midst, which was founded by Don Andres Almonaster y Roxas in 1786, where clinical instruction has been carried on with more practical advantages open to the student than are to be found anywhere else, perhaps, in the United States. Early in her history, the state of Louisiana became instructress in the science of medicine to her sister states of the west and southwest. The study of diseases peculiar to the climate has progressed in this way, with immense advantage to society and to science.

The problems of engineering involved in the drainage and sewerage of the great alluvial plain on which New Orleans is built, the settlement of plantations in different parts of the state, and the treatment of epidemic diseases have been constantly carried on with extraordinary benefits because of the success achieved in their profession by scientific physicians, benevolent men, the benefactors of their kind, who have practiced their calling in the interest of humanity.

In bidding you, as I do, a truly heartfelt welcome, I represent the feeling and sentiment of all our people. They ask your aid and counsel. They hope your deliberations will be marked by entire freedom of inquiry, as well as by harmony, and they look to the results, with assured confidence that these will inure to both private and public good. (Applause.)

Welcome to the State.

In behalf of Governor Heard, Gen. Leon Jastremski spoke as follows:

Mr. President and Members of the American Medical Association:

Called to the dedicatory exercises of the Louisiana Purchase Exposition at St. Louis, the Governor could not extend to you Louisiana's official welcome to the metropolis of the south. It is due to this circumstance that he deputized me to perform this very pleasing duty, which I regard also as a high honor. I would fail in my effort did I not say that in no state or country is the medical profession, or, better still, the calling of medicine, held in greater esteem or admiration than in Louisiana. It is the noblest and most ancient of all professions, dating back, according to the records extant, to the seventeenth century before the Christian era. To the land of the Pharaohs and the pyramids, to ancient Egypt is given the fame of inaugurating the records of the researches of medicine. In that remote era, and in succeeding ages, medicine was combined with theology and philosophy and was held in a reverence akin to superstition. The Jews, the Greeks, the Romans and afterward the Latins propagated the science throughout Europe and America. Amid the desolating plagues, in the camps of the Crusaders, the physician and surgeon went forth braving and enduring every hardship in pursuing his mission and acquiring knowledge. Then, as now, in his merciful work he made no discriminations between the king and the knight, the artisan and the peasant, the high born and the lowly, friend or foe. For him mankind has always been a vast brotherhood, at whose call for help he feels in duty bound to respond.

Some divine inspiration lifts the physician above the level of his fellow men and ennobles his nature. No danger, no loathsome disease repels him. He is found on the battleship, in the camp and the battlefield, attending the sick, the wounded and the dying. He is the presiding genius in the hospital and in the asylum for the insane. Everywhere he is the good samaritan, the tireless searcher for that knowledge that will more speedily cure, abate and prevent disease. For his science every decade is a decade of progress. He is of that army for which there are no hours set apart for repose. When others are resting from labors of the day, the physician is rising to bring hope and relief to the chamber of the sick. We can see him in the lurid conflagration at Moscow and in the appalling retreat of the Napoleonic army over the frozen and snow-covered steppes. We can see him in the column that marched to the relief of Lucknow, and with the famous expedition to Obdurman, across the burning sands. We descry him with the blue and gray at Gettysburg, at Shiloh, at Franklin and at Petersburg. All this is but a shadowy portrayal of the glories and the achievements of those knights of the medical profession, "without fear and without reproach," whose mission is to save, when other men, when nature itself, seek to destroy. Look the world over to-day, and you will be amazed at the progress that medical science has wrought. With its remedies it has mastered hitherto incurable ills, and by the wonderful operation of surgery it saves life and limb in cases that were helpless only a few years ago. By its discoveries in sanitation it has arrested the depopulation of cities and minimized contagion, so that the population of the world is increasing at a ratio never before attained.

You are here to impart to one another the additional knowledge that you have garnered separately for the expansion of the science to which you have devoted your lives. From your conferences, from your discussions, there will flow for mankind beneficences far more precious than heaps of gold.

For all the good that your profession has showered on mankind; for all the good that the American Medical Association has done in the past, and for all the good that it will do in the future, do I extend to you the most profound, the most friendly and the most loving welcome of the state of Louisiana. (Applause.)

Layman's Welcome.

Henry P. Dart, of the local Bar, spoke the welcome of the laymen as follows:

When I was notified to deliver one of the addresses of welcome on this occasion, I inquired who were the other speechmakers. The good doctor who was communicating with me said that the governor would deliver one on behalf of the state, the mayor one on behalf of the people of the city, and then, after some deliberation, he added: "and you may consider that you are going to appear on behalf of our patients."

While the prayer of the chaplain just delivered would indicate that you have also taken thought on the subject and have left your patients to the care of one who never fails, it is quite appropriate that I should convey to you the compliments of your patients and their congratulations that you are so harmlessly engaged on this fair morning in New Orleans. I almost regret to have to add that this city is so distressingly healthy that you would not be able to find substitutes to operate on in lieu of those you have left behind. (Laughter.)

I was further admonished that time was a factor in this address, inasmuch as it was known that 1,500 or more of the brethren would be in the audience, each with a thesis in his pocket and that delivery thereof was essential to the health of the author—a most unparalleled condition of affairs among people who usually do so little talking.

I was also warned to keep away from strictly technical subjects, leaving pulmonary complaints and disordered joints and things of that sort to the consideration of the fraternity. In fact, it was suggested that I should try to get on some ground of common understanding with the people at large, where the sects and divisions of the assemblage could do their thinking without undue effort to follow the speaker. This was, I thought, a delicate hint that while on this task my predecessors from my profession had exhausted the great question of medical jurisprudence, expert testimony, etc., and had exhausted their audience also.

It certainly is a great pleasure to participate in a gathering of so many of the best and strongest of a great profession, and it tempts one to wish that he could suggest something that would leave a lasting reminiscence in the minds of his hearers. As it is, I shall content myself with a mere note or suggestion of something which seems to me worthy of consideration in this wide and splendid life that you gentlemen lead.

From a layman's point of view, one of the most noteworthy contributions to an age full of noteworthy things is the modern hospital, which is supported entirely by the labors of the medical profession, without whose time, strength and money it would be impossible for its doors to open for the service which it professes.

Statistics show that these great institutions are managed under an expenditure and with as much care and pains taken as is found in the great industrial occupations of the day: and yet, marvelous to relate, the entire medical machinery of the same is furnished absolutely without cost. It is true that one or more men in each institution receive a stipend for their services, but that only proves the rule. All over the country these institutions are accustoming the people to the free services of the physician and surgeon. The rank and file of the community have learned that in these hospitals they will get the best of care, the best apparatus, and the best hand and brain that the profession can furnish, and they appreciate that they get all of this free; and so deep is their appreciation that I fear that they have fallen into the habit of looking on the members of the profession as walking eleemosynary institutions.

The hospital is built on private munificence. The state, it is true, here and there, as in the case of our own noble institution in New Orleans, makes an annual contribution; but this in no wise represents the great sum total of wealth that flows in and out of their portals. How long will the present system continue? Will the people of the coming generation and the members of your profession continue to serve as you have in the past, following literally the mandate of the Divine One to go forth and heal, taking thought neither of scrip or raiment, and depending, as did Elijah in the desert, on the ravens of chance and accident for your subsistence?

The mind is staggered when it contemplates the extent of the sacrifice made annually by the body of your profession in the service of humanity, by way of the hospitals of the country. No other sect or profession can point to an equal record. The preacher follows a philanthropic course by desire, and can not be blamed if his Maker gives him plenty to do while man fails to compensate him. The lawyer is fond of thinking that he is a great contributor to the public welfare without due compensation, paradoxical as that may seem to some of you; but it must be conceded that in the presence of this magnificent giving of the medical profession of their health, their strength and their time, there is no parallel in the world. It comes in on me as a real thing that this tremendous development on charitable lines is a marked characteristic of the times, and it suggests a tendency of the race. It is not accidental, it is an educated taste for which you are responsible, and it opens a great social question, whether or not some day the state will be forced to take it up as a state problem, and to manage charity in so far as healing and curing are concerned as a state institution. But I have not come here with a problem or a theme. I have merely thrown out a thought to fructify while you are bearing, like Atlas, the world of suffering and sorrow on your mighty shoulders.

Response to the Addresses of Welcome.

By the First Vice-President, Dr. J. A. Witherspoon of Nashville, Tenn.:

Mr. President, Ladies and Gentlemen:

I feel hopelessly unable to respond to the welcomes received this morning, especially on such notice as thirty minutes, were it not for the fact that I belong to and am a son of the south and know that every sentiment expressed by these gentlemen is a demonstration of the hearts of every citizen in New Orleans and Louisiana. (Applause.) I feel especially honored in being called on to respond to these addresses of welcome, in view of the fact that I live in the very shadow of the home of that grand old man, Andrew Jackson, who once, with his 3,000 Tennessee squirrel hunters, defended this fair city against the British. (Applause.)

So far as the hospitality at New Orleans is concerned, it was well illustrated by an Irishman, whose friend came to this country, and, having died here, his body was immersed in alcohol and sent back to his native country for burial, and his remark was, "Begorrah! The gentleman leaves in better spirits than he came." (Laughter and applause.) Even the dead in Louisiana are in good spirits.

The work of this state and of this city, headed by your remarkably intelligent State Board of Health, reflects credit on the medical profession, and it is a work that we can point to with pride. New Orleans has been visited so frequently by that particular scourge, decimating our people, blanching the faces of the bravest, so that the medical profession has sprung up as a unit to fight back those terrible diseases that knock at the citadel of our fair land. By the efforts of the Marine-Hospital Service and your State Board of Health we have now reached that proud position where we can say to that death-dealing monster—yellow fever—thus far shalt thou go and no further; you shall not wreck this fair land and take the loved ones from our bosoms, stop the commercial and agricultural interests of the entire people by your death-dealing poison. (Applause.)

We feel, in coming to New Orleans, that we come to one of the oldest and grandest and most hospitable places in this broad land. Many of us come from the east and north for the first time, and they have learned to look on our mountain peaks and our rivers as the most beautiful. It is even claimed that in some of our mountain districts we can stand on the very top of them and tickle the feet of the angels above. (Laughter.) But when we get down here to this temple in the universe, we feel very much like those who have not reached that state of married blessedness; likewise, we do not want to tickle the angels' feet, but we do like to tickle the fancies of some of them. (Laughter.)

Now, ladies and gentlemen, we thank you very much for the courteous and hearty welcome you have extended to us. We all feel at home. We have all left home to give our patients a chance to get well. I want to say to my good friend the lawyer, who has addressed us, that I feel very proud that one of his profession should have at last seen the beacon light and found out the medical profession stands on a pinnacle so high that law can only talk at it. (Applause.)

I have been called on unexpectedly to address you, and I feel very much like the old darky in Virginia who was carrying a turkey along under his arm, and a ventriloquist threw his voice to him: "What are going to do with me?" The old negro looked at the turkey, and said, "I'se gwine drop yuh right heah." (Applause.)

We thank you for your hospitality; we assure you that we feel perfectly at home, and, with these words, I leave the subject with you. (Applause.)

Report of the Committee of Arrangements.

Dr. Isadore Dyer, chairman of the Arrangements Committee, read the following report:

Mr. President and Gentlemen, Members of the American Medical Association:

I understand that a brief report is expected from the chairman of the Committee of Arrangements.

As soon as the medical profession of New Orleans was officially advised of the fact already published in the daily press that the American Medical Association was to meet in New Orleans, organization of the local members of the American Medical Association was effected.

The history of their work has been related in the Association JOURNAL. It remains only for the chairman to convey his high estimation of the individual services of the several sub-chairmen, who have been constant in their labors and earnest in effecting the result which we submit to you.

Whatever fault you may find must be attributable to our crudeness and newness to so stupendous a task; whatever credit or praise, to the work of every man on every committee.

The President's Address.

The First Vice-President, Dr. J. A. Witherspoon, at this juncture took the chair, and President Billings delivered his address. He selected for his subject, "Medical Education in the United States." [This appeared in full in THE JOURNAL, May 9, pages 1271 to 1276.]

TUESDAY, MAY 5—SECOND GENERAL MEETING.

The meeting was called to order by the President, Dr. Frank Billings, in the Carondelet Methodist Church, at 7:45 p. m.

Oration on Surgery.

The President introduced the orator of the evening, Dr. A. F. Jonas of Omaha, who delivered the Oration on Surgery. [This oration, on "Cancer and Immunity," appeared in full in The Journal, May 9, pages 1277 to 1284.]

Report of Committee on Portraits of Ex-Presidents.

Dr. J. R. Pennington, Chicago, chairman of the Committee on Portraits of Ex-Presidents, reported progress. He said that of the several portraits of ex-presidents in preparation for presentation to the Association, two have been received by the committee and will be formally presented by gentlemen who have been selected for that purpose.

Presentation of the Portrait of Dr. T. G. Richardson.

Dr. Edmond Souchon, New Orleans, presented the portrait of Dr. T. G. Richardson. In doing so, Dr. Souchon said:

It is indeed a great honor that was conferred on me to present the portrait of the first Louisiana President of the Association, Dr. T. G. Richardson, to the American Medical Association for its Hall of Fame. It is a labor of love, however, as I had the happiness to be intimately associated with this good and remarkable man, having been his prosector, his chief of clinic, his assistant also in almost all his operations in private practice and having been his friend and his fervent admirer.

It would require a book to tell of all his life and a pen much more gifted than mine to do justice to this noble man and his great work, but in the brief moments that are allotted me I can only recall the most salient traits of his life and achievements.

Dr. Richardson was born in Kentucky in 1827, and at the age of 18 he began the study of medicine under the direction of the great S. D. Gross, who was the professor of surgery in the Louisville Medical College, and the influence of Dr. Gross on his young pupil was magnetic and most beneficial. Dr. Richardson graduated in 1848 from the medical department of the University of Louisville, and he was immediately appointed demonstrator of anatomy in the medical department of that university. In the midst of his numerous labors he found time to write in several medical periodicals, and founded and edited, with Dr. Gross, in 1855, the "Louisville Review."

In 1856 he resigned his position as demonstrator to accept the chair of anatomy in the Pennsylvania College at Philadelphia, as Dr. Gross at that time had accepted the chair of surgery in the Jefferson Medical College, when they both founded in Philadelphia the "North American Medico-Chirurgical Review." Dr. Richardson was a remarkable dissector, as is evidenced by the numerous specimens he prepared at that time of his life and which now adorn the museum of the medical department of Tulane University, and he was the first one, I think, who used plain English names in his lectures and in his book on anatomy.

It was in 1858 that Dr. Richardson moved to this city to fill the chair of anatomy in the medical department of the University of Louisiana.

He had served as such but four years when the war broke out and, joining the Confederate Army, he became surgeon on the staff of General Bragg, during which term of service he was Medical Inspector of the Army of Tennessee, then Medical Director of the Department of North Carolina, and he was present and on duty at the famous battles of Murfreesboro, Chickamauga, Missionary Ridge and others.

After the war Dr. Richardson returned to New Orleans and was elected dean of the medical faculty. Then began, with the dark days of reconstruction, a most sickening and despairing struggle to prevent the college from falling into the hands of the carpetbaggers, and it required all the courage, determination and skill which he possessed to succeed, but he did ultimately succeed, and all agree that he was the only one who could have succeeded.

In 1872 Dr. Richardson became professor of general and clinical surgery in this college, succeeding the renowned and lamented Stone. It was in 1877 that Dr. Richardson was elected President of the American Medical Association, and presided at the annual session in Buffalo, N. Y., being the first president elected from Louisiana and still the only one.

His health began to fail him in 1886, and he was compelled to resign the chair of surgery in 1889. His illness lasted several years and, in spite of great sufferings, his thoughts were always with his beloved college, so much so that, together with his admirable and generous wife, he donated the sum of $100,000 for the building of a new medical college, the one now standing in our midst and bearing the glorious name of the Richardson Memorial.

Dr. Richardson died in 1892, before he could see the completion of the new college, having been dean for twenty years, a professor for thirty-one years, and having served the profession forty-four years.

Dr. Richardson was tall and stately, with a face of Olympian beauty, particularly as he grew older, with an appearance most impressive. It was reserved and somewhat cold, but it was only on the surface, because no warmer and generous heart ever beat in man's breast. This was most evidenced when he grasped your hand; then a magnetic current ran from him into you, and you felt at once that he truly was a good and earnest man; he was also calm, dignified, unostentatious; his sense of duty was intense, akin to worship, and the word responsibility was to him tremendous and overwhelming.

As a teacher he was surpassed by none, and as a surgeon he had the true mettle, as I could judge in many bloody and trying surgical operations.

He was at all times earnest, clear and forcible in his statements, and was most impressive in his teachings. His judgment was most clear and unerring, and he was modest beyond expression. In all my years of association with him I can not recall an instance when he lost the control of his temper, nor have I ever heard him utter a word of the mildest profanity.

His friendship was as true as steel. He never made any promise, but he had a good trait in that he would do things when you were in need that most unexpectedly showed that he was your friend indeed. Many have been the recipients of his bounty, and I am one of the living examples.

His love for brilliant plants and for exotic trees was most notable. He was unduly fond of children, who were instinctively drawn to him, and his devotion as a husband was the admiration of all who were admitted to his family life. He traveled all over the world, and specially delighted in exploring parts less known to most people.

He was most pure in thoughts, and hated hypocrisy, and last, but not least, his religious nature was most beautiful in its grandeur and sincerity, and many times it excited the envy of the less fortunate ones. When sickness and suffering struck him, he displayed a fortitude and submission to the will of God that was the admiration and wonder of those who saw him in the years of agony that tortured him before he died. A life-long friend of his, the Rev. Dr. Palmer, said that he was remarkable for the simplicity and directness of his character, due to the fact that he was pre-eminently self-contained.

Such was the man whose noble portrait will now truly adorn the Hall of Fame of the American Medical Association.

The General Meeting was then declared adjourned.

Wednesday, May 6—Third General Meeting.

The Association met at the Carondelet Street Methodist Church, and was called to order at 7:45 p. m. by the First Vice-President, Dr. Witherspoon.

Oration on Medicine.

Dr. J. M. Anders, Philadelphia, delivered the Oration on Medicine. [This oration, on "Social Conditions in America in Their Relation to Medical Progress and Disease," appeared in full in The Journal, May 9, pages 1284 to 1292.]

Presentation of Portrait of Dr. Hunter McGuire.

Dr. W. L. Rodman, Philadelphia, delivered an eulogy on Dr. Hunter McGuire, in presenting his portrait to the Association:

In Winchester, Va., Oct. 11, 1835, there began a life which was destined to be famous ere its first quarter of a century was rounded. The son of an eminent physician and surgeon, the talents of Hunter McGuire were fortunately dedicated to medicine. At the age of 20 he received his diploma from the Winchester Medical College, of which his father, Dr. Hugh H. McGuire, was one of the founders and professor of surgery.

Feeling the need of greater clinical advantages than were offered in Winchester, he matriculated in the fall of 1856 in both the University of Pennsylvania and Jefferson Medical College of Philadelphia, that city being then the mecca of southern students. His studies were soon interrupted by an attack of acute rheumatism, and he was compelled to return to his home in Winchester. In 1857 he was elected professor of anatomy in his alma mater, which position he filled one year.

In 1858 he was called to Philadelphia to join Drs. Francis E. Luckett and William H. Pancoast, a son of the famous surgeon and professor of anatomy of Jefferson College, in the conduct of a private quiz class for the benefit of students of that college. Some surprise was expressed that so young and unknown a man should be called to such an important teaching position. Dr. Luckett, when asked why he had chosen so youthful an associate, said: "Wait and see why I wrote for him." In accepting this call, we assume that Dr. McGuire was actuated by a desire to complete the studies interrupted by sickness two years before and to sit at the feet of the two great masters in surgery then at Jefferson College, Gross and Pancoast; the one the greatest surgical philosopher and teacher of his own or any time, the other the most consummate anatomist and the deftest operative surgeon of his day. Young McGuire, tall, spare, handsome, with manners somewhat unconventional and less gracious than many southern men possessed, yet always delightful, pleasing and entertaining as a companion, soon became the leader of the many southern students in this institution—in fact, their beau ideal. His success as an extramural teacher was remarkable and added much to the drawing ability of Jefferson College. Prior to this time a majority of the sons of wealthy southern planters who studied medicine had been going to the older and more renowned institution, the mother of medical schools on this continent, the University of Pennsylvania. The influence of Luckett and McGuire, both Virginians, was potential with southern men and drew many of them to the younger institution.

In December, 1859, sectional feeling became most bitter on account of John Brown's raid at Harper's Ferry, and when his body was brought through Philadelphia en route to his former home in Kansas for burial, the excitement reached white heat. It was then that young McGuire showed the elements of manhood and leadership which characterized him ever afterward. He left Philadelphia, marching at the head of 300 southern students, all armed, for the feeling was bitter and threats had been made against them, bound for Richmond, Va., where the study of medicine could be continued under more congenial environments. He advanced $2,000 of his own money, which he had saved as a quiz teacher, to pay the railroad fare of those students who were unable to do so. They were met in Richmond at the capitol square, where they were addressed in a stirring speech by Gov. Henry A. Wise. The citizens generally received them most cordially; the city council refunded the money spent in railway fares, and the Medical College of Virginia matriculated them without charge, most of the students remaining there, only a few going farther south to Atlanta and New Orleans.

McGuire received his second medical degree from this institution in the spring of 1860. In the fall of this year he then removed to New Orleans and established a quiz class in connection with the medical department of the University of Louisiana, now Tulane University. His stay in New Orleans was destined to be brief, for the following year South Carolina seceded from the Union and his native state, Virginia, was contemplating the same action. Loyal to her, brave and impetuous, he laid aside, for the nonce, the scalpel and listened to the stern alarums of war. He at once returned to Virginia, enlisted as a private soldier, marched to Harper's Ferry, and there he was commissioned as a surgeon and assigned to the command of Gen. Thomas J. Jackson.

In May, 1861, he became medical director of the Army of the Shenandoah, and later, when General Jackson assumed command of the First Virginia Brigade, he asked that Dr. McGuire be made his brigade surgeon. From that time on until the death of his illustrious commander he was closely associated with him personally and professionally. McGuire fully realized that he had been advanced beyond those much older than himself and, feeling that others questioned the wisdom of his very rapid advancement, he went to General Jackson and said that, rather than seem to be the means of doing an injustice to older men, he preferred tearing from his shoulders the insignia of office. Jackson, in his quiet, stern way, simply answered, "I appointed you." This must have meant to the young surgeon that it was an appointment of merit and not a personal preference.

No man ever had a keener insight into men's characters and was able to judge them instantly to a greater extent than Stonewall Jackson. This was, perhaps, the chiefest reason for his brilliant and meteoric career, and has caused him to be recognized by many as the greatest military genius produced by this, the greatest of wars. He saw in the tall, somewhat awkward young man qualifications of mind and heart on which he could unfalteringly depend in the many hard-fought battles and campaigns which yet lay before them. Never were trust and confidence better warranted. The youthful brigade surgeon was first to organize reserve corps hospitals in the Confederacy; this being done in the spring of 1862, during the Valley Campaign. About the same time he perfected the ambulance corps.

Greater, by far, than either of these, important works though they were, was his action early in the war requesting of his commander that eight Federal surgeons who had been captured be at once released on their own promise to endeavor to secure the release of an equal number of Confederate surgeons. This request was at once granted by General Jackson. This action, so manly, so lofty, so humane, at once attracted attention everywhere, and the practice of recognizing medical officers as non-combatants became practically universal in both armies. When he himself was captured in 1865 an order was promptly issued for his release by General Sheridan.

This is neither the time nor the place to speak of the valuable services rendered the Confederacy, from Manassas to Appomattox, by this able military surgeon. Without disparagement to others, it will be generally granted that he was the most conspicuous, useful and, perhaps, the greatest medical director in either army during the Civil War. He was, of course, fortunate in serving under such commanders as Lee, Jackson, Ewell and Early and could not have enjoyed the confidence of all as a man, a surgeon and a soldier to the extent that he did unless possessed of unusual qualifications. As a result of his large and varied experience as a military surgeon, he was asked to write the chapter on gunshot wounds for Holmes' System of Surgery, and has ever since been recognized as an authority on the subject throughout the civilized world.

His two most distinguished patients during the war were General Jackson himself, on whom he did an unsuccessful amputation, and a young lad, 18 years of age, who was shot with a minie ball midway between the knee and hip, which shattered the bone badly and which caused McGuire and the other surgeons to advise hip-joint amputation. The young fellow protested; McGuire telegraphed to his father, who came from Lynchburg, and, as a result of the entreaties of father and son, an effort was made to save the limb. McGuire removed nearly all of the femur, little dreaming that his patient would recover. He did so, however, and, though a cripple in body ever since, he is a giant in intellect, and to-day represents Virginia in the United States Senate.

After the close of the war in 1865, utterly broken in fortune, but not in spirit, Dr. McGuire settled in Richmond, Va., to begin the practice of medicine. He was soon called to the chair of surgery in the Medical College of Virginia, made vacant by the death of Dr. Charles Bell Gibson. The same qualifications which had made him so successful in war brought him immediate recognition and success in civil practice. As a teacher he was clear, lucid and forceful. He soon became famous as a lithotomist, lithotripist and ovariotomist; patients coming to him from all parts of the south.

The year after he settled in Richmond he married Miss Mary Stuart of Staunton, Va., daughter of Secretary of the Interior Stuart under President Fillmore. She must have been a beautiful girl, judging from her appearance and gracious bearing as a mature woman when she officiated, in 1892, as the wife of the President of the American Medical Association. Her manners were most charming. They were a typical southern couple and unusually devoted to one another. As a result of this union there were nine children, two of them physicians, Dr. Stuart McGuire of Richmond and Dr. Hugh McGuire of Alexandria. The former, who was associated with his father in work, now fills his professorship and is a man of fine ability and one of the well-known surgeons in the south.

Dr. McGuire continued to fill the chair of surgery in the Medical College of Virginia until 1878, when faculty differences caused him to retire. Later on, however, he was made emeritus professor of surgery. He devoted himself, for several years, entirely to his private practice, which was so large as to compel him to have a private hospital, which he built in 1883 and called "St. Luke's Home for the Sick." In 1893 Dr. McGuire organized and caused to be incorporated the University College of Medicine, the doors of which were opened in October and which at once proved to be a success. From the beginning it was a three-year graded school and up to the time of his death he was its professor of clinical surgery.

Dr. McGuire was no ordinary man; he was an original thinker and can be truly considered a "pathfinder" in medicine and surgery. His large experience as a military surgeon had taught him the futility and hopelessness of treating gunshot wounds of the abdomen by the expectant plan and many years before the first laparotomy was performed for such injury he advised it and predicted that the time would come when gunshot wounds of the abdomen would not be treated by opium and a "do-nothing" policy. To McGuire and Sims, who were the first in America to advise surgical intervention in gunshot wounds, and to Kinloch, the first to put into practice this teaching, we are indebted for the advancement which has brought at least 50 per cent. of recoveries where hitherto nearly all had been lost. I speak advisedly, I think, for then the large, round, leaden ball was used which, moving with slow velocity and usually carrying in with it foreign material of septic nature, was practically always fatal. Great as is the word of speech, the word of action is greater, and we must, therefore, accord to Kinloch the greater credit. Perhaps McGuire was best known for his work in the treatment of enlarged prostate, and his original operation of establishing an artificial urethra after a suprapubic cystotomy. At this time, when prostatectomy and Bottini operations are the fads of the day, it is well particularly to emphasize the good work done by McGuire in this direction. There is no doubt that many cases have been made to enjoy a comfortable existence by his operation which would have inevitably perished had either a prostatectomy or Bottini operation been performed on them.

Dr. McGuire had many civic and professional honors conferred on him; being in turn president of the Richmond Academy of Medicine; one of the organizers and president of the Virginia State Medical Society; president of the Southern Surgical and Gynecological Association; vice-president of the International Medical Congress; president of the American Surgical Association, and President of the American Medical Association in 1892. He had many honorary degrees conferred on him by different institutions, notably Jefferson College, where he wrought as an extramural teacher in anti-bellum days.

He was not a voluminous writer, and yet he wrote singularly well and has left several productions which will endure. As a companion he was most charming and entertaining. As a raconteur he had few equals, and could tell the southern darky stories in a way that no one else I have ever seen could do. He was easily the foremost citizen of Richmond and was so recognized.

His life closed with the nineteenth century, which had produced so many great men and had seen surgery advanced in such a remarkable way.

McGuire was fortunately young enough to accept and practice antiseptic surgery from its birth, and it was due to this fact that he, along with Yandell of Louisville, his intimate friend, could do better work than any of their great predecessors had done.

No part of America has contributed more to surgery than the south, and the impartial critic must accord Hunter McGuire a high place, even in such company as McDowell, Dudley, Brashear, Sims, Battey, Stone, Smythe, Eve and Yandell.

In the spring of 1900, while driving from his house to St. Luke's Hospital, he was seized with acute bulbar paralysis. Unable to speak, he motioned his driver to hurry on to the hospital, then, suddenly changing his mind, he directed him to drive to his home. Here he lived surrounded by his faithful wife and children for six months, unable to articulate, but at times able to drive and walk about. He had been in ill health for several years, being a great sufferer from gout, and this, we know, prevented him from attending the various associations of which he was a member. He was so missed at the Denver meeting that at the banquet of the Section on Surgery it was unanimously voted that he be sent a telegram conveying the love and best wishes of the Section.

On September 19 he fell asleep, hearing, let us believe, the voice of his great commander calling, "Comrade, I am waiting. Cross over the river and rest under the shade of the trees."

Now, Mr. President, in the name and by the request of his family, I take pleasure in presenting the Association with the portrait of the surgeon, the soldier, the gentleman, Hunter McGuire of Virginia.

A motion was made and carried thanking the donors of Dr. Richardson's and Dr. McGuire's portraits, after which the meeting was adjourned.

Thursday, May 7—Fourth General Meeting.

The Association met at 7:30 p. m., and was called to order by the President

Dr. William H. Welch, Baltimore, delivered the Oration on State Medicine.

After this the Association adjourned.

Friday, May 8—Fifth General Meeting.

The General Meeting was called to order at 12:15 p. m., in the Carondelet Street Methodist Church.

The Secretary presented a brief report of the work accomplished by the House of Delegates, and announced the officers elected. [See proceedings of the House of Delegates, page 1383.]

President Billings invited the Vice-Presidents present to the platform, and among those who responded were Drs. G. C. Savage, C. Lester Hall and George F. Jenkins.

Turning to the Vice-Presidents, President Billings said: I congratulate the Association, and I congratulate you, on the election to the high office you occupy for the ensuing year.

President's Closing Address.

In closing this meeting, I desire to say a few words to the members of the Association who listened to my long address at the opening, and to the House of Delegates, who have borne with me patiently for four days. In addition to what I said last year when inducted into office, I wish to say that I appreciate the honor which this Association did me in electing me its President. I have endeavored with might and main, truthfully and faithfully, to do the work which the office entails. If mistakes have occurred, they have been mistakes of judgment, and my ability was not sufficient to prevent them. But I can assure you that my efforts have always been in earnest.

Again I thank you most heartily for the honor you have done me. (Applause.)

Dr. Charles A. L. Reed, Ohio, moved that when the Association adjourns, it does so to meet in adjourned meeting on Tuesday, May 12, 1903, at 2 p. m., at 103 Dearborn avenue, Chicago. Carried.

On motion of Dr. McMurtry, the General Meeting then adjourned.

HOUSE OF DELEGATES.

Proceedings at New Orleans, May 4, 5, 6, 7 and 8, 1903.

Official Minutes.

Monday, May 4, First (Informal) Meeting.

The House met informally at the Carondelet Street M. E. Church, and was called to order by the President, Dr. Frank Billings, Chicago, at 3 p. m.

The President stated that the object of the informal, but unofficial, meeting was to listen to reports of committees, which were published, and refer them to committees, thus shortening the work which would come before the House at future meetings. He said, further, that last year the Business Committee recommended that the House of Delegates hold its first meeting at 8 o'clock the evening preceding the regular meeting of the Association, and a resolution to that effect was accordingly adopted. Therefore, at 8 o'clock this evening the House could transact regular business, if there was no objection.

The report of the Board of Trustees was called for, and passed, as the board was not ready to present its report at this time.

Report on Prophylaxis of Venereal Diseases.

Dr. Henry D. Holton, Brattleboro, Vt., chairman of the Committee on Prophylaxis of Venereal Diseases, read the report of that committee. [This was printed in full in The Journal, May 9, pages 1317 to 1319.]

Dr. William T. Bishop, Pennsylvania, moved that the thanks of the House be extended to the committee; that the committee be continued, and granted the privilege of appointing additional members, if deemed necessary, to carry out the recommendations submitted in the report. Seconded.

Dr. H. Bert Ellis, California, moved to amend that the Board of Trustees be instructed to furnish funds necessary to carry on the work of the committee. Seconded by Dr. Hill, Wisconsin.

The amendment was accepted; whereon Dr. J. N. McCormack, Kentucky, moved as a substitute that this important matter be referred to the Business Committee, and subsequently be brought before the House with the recommendations of the Business Committee.

The substitute was seconded and carried.

Business Committee Reports.

The President called for the report of the Business Committee.

Dr. Harold N. Moyer, Illinois, chairman, said the committee had not been able to have a formal conference in reference to matters to come before the House; therefore, a definite or formal report could not be made at this time. However, he was prepared to say that the committee had agreed on this plan: That the House of Delegates shall meet at 9 a. m. in official executive meeting, and it is hoped that half an hour or an hour devoted to each meeting will dispose of the business, permitting an adjournment of the House as a whole, and passing then to a committee of the whole, for the discussion of such special topics as might be assigned from the House. An afternoon meeting of the House could be held, if necessary. This, in brief, was the substance of the committee's report, so far as it relates to advising the House as to the conduct of its business. Dr. Moyer said the Business Committee would make its formal report at a subsequent meeting.

On motion of Dr. A. E. Baldwin, Illinois, the matter of selecting a member to respond to the addresses of welcome was left to the President.

On motion, the House adjourned, to meet at 8 p. m.

MONDAY, MAY 4, SECOND MEETING.

The House reconvened at 8 p. m. and was called to order by the President.

Dr. H. N. Moyer, Illinois, chairman of Business Committee, said the committee had considered the status of this meeting, and that it was in conflict with the Constitution. Therefore, anything done would have no legal effect. The committee urged, however, that such business as could be gotten through be taken up, and, as a preliminary to that, unanimous consent to the consideration of business at this time should be obtained, otherwise the committee feared the House could not proceed.

On motion of Dr. William T. Bishop, Pennsylvania, unanimous consent was granted and the business proceeded.

Dr. Moyer, speaking for the Business Committee, said that, according to a resolution adopted last year, all new business is referred to the Business Committee without debate. He, therefore, suggested that the resolution of last year be carried into effect this year.

Dr. H. O. Walker, Michigan, moved the readoption of the resolution of last year. Carried.

Dr. Moyer said the Business Committee recommends that when this meeting adjourns, the House meet at 2 p. m. tomorrow.

Dr. H. A. West, Texas, moved that the recommendation of the committee be concurred in. Carried.

Dr. Moyer stated that the Business Committee recommends that the following business come before the meeting: 1. Report of Board of Trustees. 2. Report on Association Medal. 3. Report on Senn Medal. 4. Report of the Committee on Scientific Research. 5. Report of Committee on Public Health.

It was moved that the order of business be that outlined by the chairman of the Business Committee. Carried.

The Secretary called the roll of delegates, and a quorum responded.

Report of the Board of Trustees.

Dr. T. J. Happel, Tennessee, chairman of the Board of Trustees, then read the report of the board. [This appeared in full in THE JOURNAL, May 9, pages 1309 to 1317.]

On motion of Dr. H. O. Walker, Michigan, the report was accepted and the recommendations contained therein referred to the Business Committee.

The President called for the report of the Committee on Association Medal, which was passed.

The President called for the report of the Committee on Senn Medal, when Dr. M. L. Harris, Illinois, a member of the committee, said the committee was not yet ready to make its report. He asked for further time, which was granted.

Report of the Committee on Scientific Research.

In the absence of Dr. Alfred Stengel, chairman of the Committee on Scientific Research, the Secretary read the report of this committee, as follows:

Early in the fall, the committee advertised in the pages of THE JOURNAL and through other medical journals, that five grants of $100 each would be made to persons applying for the same who could show sufficient training and opportunity to warrant the making of a grant. Considerable correspondence resulted and applications were received from a number of physicians. From these the committee has selected, as most deserving, the following:

Dr. Newton Evans and Dr. F. J. Otis, Battle Creek, Mich., for work on "Systemic Infection with Blastomycetes."

Mr. G. F. Ruediger, Rush Medical College, Chicago, for work on "Virulent Streptococcus."

Dr. J. T. Moore, Galveston, Texas, for a study on the "Latency and Relapses of Malarial Fever."

Dr. H. E. Wetherill, Philadelphia, for an "Experimental and Clinical Study of Sweat Secretion."

ALFRED STENGEL, Chairman.

On motion of Dr. E. E. Montgomery, Pennsylvania, the report was referred to the Board of Trustees, inasmuch as it involves the appropriation of money.

The report of the Committee on Public Health was called for.

Dr. H. A. West, Texas, a member of the committee, said he had not heard from the chairman. He suggested that the report of this committee be postponed until the members of the committee had held a meeting.

The suggestion was accepted, after which the House, on motion, adjourned to meet in the Council Chamber of the City Hall at 2 p. m., Tuesday.

TUESDAY, MAY 5, 1903—THIRD MEETING.

The House of Delegates met at 2 p. m. and was called to order by the President.

The Secretary called the roll, and a quorum was present.

The Secretary read the minutes of the previous session.

On motion of Dr. McCormack, the minutes were adopted as read.

Dr. Joseph D. Bryant, New York, took the chair, and President Billings delivered the following:

Message of the President to the House of Delegates.

The year just completed has been a remarkable one in the history of the Association.

This, the second meeting since the plan of reorganization was adopted, finds something like eighteen states practically completely organized on the plan outlined by the Committee on Organization. This committee will make a detailed report, which I am sure will be most gratifying to you.

THE FUTURE REORGANIZATION PROGRAM.

The Board of Trustees has told you of the necessity of commanding the service of an organizer who may visit the different parts of the country and personally explain to the physicians of county societies and of state associations the plan of organization.

The Trustees found an ideal man in the person of Dr. J. N. McCormack, chairman of the Committee on Organization. He is especially fitted for the task. His strong personality, backed by the wisdom of a Solomon, a superlative tact and the thorough knowledge of the subject which three years or more of work and experience in reorganization has given him, enable him to do the work as could few, if any, others.

We must not rest content with reorganization where we are. The work has just begun. To carry it on and complete it the

Association must spend money. If properly expended it will return to us in some form of compensation and prove a good investment.

I believe the Association should, therefore, recommend to the Board of Trustees the continued employment, if he will consent to spare the time to do it, of Dr. McCormack as an official organizer of the Association.

THE RUSH MONUMENT.

Eighteen years ago the Association met in New Orleans. At that meeting a resolution was adopted to appoint a committee for the purpose of obtaining funds with which to erect a monument at Washington, D. C., to Benjamin Rush. It was believed by the maker of the resolution that the estimated necessary sum of $50,000 with which to erect the monument could be raised by subscription in two or three years. It is not necessary to recall to you the fact that you have had a Committee on Rush Monument since that time. This year the committee decided to use the funds already in hand and carry out the plans of the Association begun so long ago.

The committee will maks its report in detail. I only desire to say that the monument will be erected on a suitable site in Washington, on or before the end of 1903. I would, therefore, suggest to you that it would be eminently desirable that the next meeting of the Association be held at Washington, when the Rush monument could be dedicated with proper and imposing ceremonies.

BUREAU OF MEDICINES AND FOODS.

During the year it became necessary for your president to appoint a Provisional Committee on the Establishment of a National Bureau of Medicines and Foods.

The necessity of the standardization of foods and drugs is one which probably all will admit who have considered the subject.

Just what part this Association may safely and judiciously take in the management and control of a corporation which shall attempt to control food and drug adulteration of the country is one on which the Provisional Committee will report.

MEMBERSHIP FOR STOMATOLOGISTS AND PHARMACISTS.

One of the best conducted sections of the Association is that of Stomatology. Its efficient secretary has served continuously for sixteen years. This section is threatened with annihilation, since the plan of reorganization was adopted. This should be obviated by the adoption of the by-law proposed last year which would enable the reputable dentists who have a degree of D.D.S. to become associate members of the Association.

The same condition appertains to the graduates in pharmacy, and similar action should be taken with them.

The mention of graduates in pharmacy reminds me that the Section on Materia Medica, Pharmacy and Therapeutics has advanced far beyond its scope. Two years ago it was proposed that the therapeutics be dropped from that section and that all papers relating to the treatment of disease be transferred to the Section on Practice of Medicine. This should be done. The proper designation of the present Section on Materia Medica, Pharmacy and Therapeutics should then be the Section on Pharmacology. The papers then offered in the section should be limited to the very broad and interesting field designated under the above-named title.

DETERMINATION OF ANNUAL SESSION PLACES.

Each year the Association is forced to precipitately consider the subject of the next place of session. The result is that the place has not been always chosen wisely.

The Association would be materially aided in choosing the next place of meeting if it should make the Committee on Transportation and Place of Session a permanent one.

It would be well to have the chairman of this committee so situated that he would be in touch with the Secretary and with The Journal of the Association.

Those cities which desire to have the Association on any specified year should be obliged to place the invitation in the hands of the committee at least three months in advance of the meeting next preceding that to which the Association is invited. The committee should then collect data as to facilities of travel, with rates, hotel accommodation and rates, and the opportunities afforded in the way of halls and other suitable meeting places by the city sending the invitation. The committee would then be able to report definite and desirable data to the House of Delegates. This would enable us to choose the next session place without fear of overcrowding in hotels, of inadequate railroad facilities, poor or widely separated halls for section meetings and extortionate charges in hotels and elsewhere.

MEMORIAL TO MAJOR REED.

Last autumn the American medical profession and this Association lost one of its most useful and illustrious members. The death of Major Walter Reed was a national disaster. His work in the investigation of yellow fever stamped him as an original scientific experimenter. His methods were resourceful, bold, brilliant and decisive. Like all true scientists, he was modest, quiet, retiring and superbly humane. He was a captain of science, but only we of the profession can know what his work has done for humanity and commerce.

To those whom his work will be of the greatest benefit his death passed unnoticed; Congress voted his widow a paltry pension.

This Association can not afford to let Major Reed's death pass unnoticed. His memory should be perpetuated by some suitable memorial to be erected at Washington or at his grave in Arlington.

Just how the Association should proceed in the matter of aiding in the erection of this memorial is a question which I shall leave to the delegates of this house.

THE BUSINESS PROCEEDINGS.

Gentlemen, the membership of the House of Delegates is composed of the picked men of the membership of the affiliated state associations. You have been selected by your state societies because you possess attributes which make you better qualified, perhaps, than your fellow members to carry on the legislative business of the Association. The members of the Association, therefore, expect work of the highest order from you. Your acceptance of the office of delegate implies that you will give the proper attention to the duties of a delegate. This means a prompt report at the opening of each session and continuous attendance at the general meetings and on the committees to which you may be appointed. This means a sacrifice of time from attendance on the scientific work of the sections and the social pleasures here offered you. This sacrifice may be minimized for most of you by promptness and fidelity in attendance on meetings and especially if we shall consider all questions which come before us in a rational, liberal minded way. There should be no quarreling here. We may differ in opinion and still retain possession of our better natures and sounder judgment. Your president is not a parliamentarian. There may be men on this floor who are versed in all the methods of blocking action and confusing the presiding officer.

This I mention as an indication of my own limitations and not that I expect to meet opposition on this floor. I bespeak your indulgence and patience, and I assure you of my desire to conduct your business fairly and with dispatch.

On motion of Dr. Wall, Buffalo, the address was referred to the business committee.

The next order was the report of the Secretary, which was read.

Report of the Secretary.

Chicago, May 1, 1903.

To the Members of the House of Delegates, American Medical Association:

Gentlemen:—At the last meeting of this Association I was instructed to obtain, as far as possible, correct information in regard to the qualifications of every physician who now claimed membership in the American Medical Association, and to drop all who are not eligible according to our laws.

For various reasons it was impossible for me to systematically start at this work before December. On commencing it, I found that the task was much larger than might have been anticipated, for the reason that but few of the state societies had a knowledge of those who were members of affiliated societies in the state and, consequently, eligible to membership in the American Medical Association. Hence, in spite of a large amount of correspondence, we have not been able to more than half complete the work of verifying our list of members.

In those states that have reorganized, the problem is an easy one, but in the other states it is decidedly difficult, although I think in a very short time the work will be completed.

At the beginning of this work there was very little coöperation on the part of the officers of some of the state societies, and under these circumstances it was thought best to let the matter drop until more interest was shown. At the present time I am glad to say that in nearly every instance a disposition is shown to co-operate with the American Medical Association, not only in this matter but in others also. The state societies are beginning to appreciate that the work of the Association in this regard especially will redound to their benefit and usefulness.

Up to the present time 146 members have been dropped on account of not being members of affiliated societies. Aside from these, between 125 and 150 were at first not qualified, but have now associated themselves with affiliated societies or have made application for membership. These have been retained on the list of members of the American Medical Association, believing that it is better to take more time and thus give those an opportunity who desire to remain members of the Association and to co-operate in the work of organization.

The experience thus far has convinced me that this enforcement of the by-laws of the Association will prove to be of benefit, not only to the county and state societies, but to the American Medical Association.

A very large number have an idea that the laws in regard to membership now being enforced are new conditions, and protests have been made for this reason. When it is shown that these rules and regulations governing membership are not new, and that the only change is that they are now being enforced, criticisms on the action of this Association are disarmed.

The membership of the Association during the year ending Dec. 31, 1902, increased about 1,450. Since January 1 there has been an increase of 920. In other words, during the last few months, since the enforcement of the by-laws, the membership has increased faster than ever.

MANILA MEDICAL SOCIETY.

I received a letter from Dr. Richard P. Strong, secretary of the Manila Medical Society, on Dec. 15, 1902, in which he said:

> I have been directed to forward to you a certified copy of the constitution of the Manila Medical Society, and to request of the American Medical Association recognition and affiliation.

I submit herewith the constitution forwarded.

UNITED STATES INDIAN SERVICE.

Dr. Z. T. Daniel, of Rose Bud, S. D., a member of the Association and connected with the United States Indian Service, wrote, under date of March 30, 1903, asking that the rules regulating membership of the officers of the Army, of the Navy and of the Marine-Hospital Service should also apply to the United States Indian Service.

DELEGATE TO THE CANADIAN MEDICAL ASSOCIATION.

April 2, 1903, I received a letter from Dr. George Elliott, general secretary of the Canadian Medical Association, dated April 1, 1903, in which he said:

> The president of the Canadian Medical Association, Dr. Walter H. Moorhouse, London, Ont., desires me to extend an invitation to the American Medical Association to appoint a delegate from your Association to the thirty-sixth annual meeting of the Canadian Medical Association, which is to be held this year in the city of London, Ontario, on the 25th, 26th, 27th and 28th days of August.

Respectfully submitted,
GEORGE H. SIMMONS, Secretary.

On motion of Dr. Bishop, Pennsylvania, the report was referred to the Business Committee.

Report of Business Committee.

The House then listened to the report of the Business Committee, presented by Dr. Moyer, Illinois, chairman, on the order of business of the day. The committee further reported that when the House adjourns, it adjourns to meet at 9 o'clock to-morrow morning.

On motion of Dr. Wall, Buffalo, the report of the Business Committee was adopted.

Dr. Moyer, Illinois, speaking further for the Business Committee, said that the committee had considered the report of the Board of Trustees and other sundry matters referred to it. He read the committee's recommendations that are detailed below.

Trustees and Journal Praised.—The committee desires to express its appreciation of the skilful management of the property of the Association by the Board of Trustees, and to commend the scientific position which THE JOURNAL has achieved under the direction of the Board of Trustees.

Dr. William T. Sarles, Wisconsin, moved that the report of the Business Committee be adopted as presented. Seconded.

Dr. William T. Bishop, Pennsylvania, moved to amend by taking the report up seriatim. Seconded.

The motion as amended was carried.

New Button Design Adopted.—Dr. Moyer then read the following: The committee recommends that the new design for the official button be adopted.

On motion, this section of the report was adopted.

Incorporation Postponed.—The next item was in regard to the matter of national incorporation. On this subject the committee reported: In common with the Board of Trustees, the committee regrets the difficulty attending national incorporation, and feels that this should be kept before the Association as an ultimate goal, but that no further action on this subject should be taken at this meeting.

It was moved and seconded that this recommendation be adopted.

Dr. Lester, New York, moved as an amendment that a committee be appointed to get the advice of the best legal talent in the United States as to whether the Association could be incorporated under an act of Congress or not, and report at the next annual session to the House of Delegates.

The amendment was seconded and accepted. After some discussion, Dr. Wall, Buffalo, moved as an amendment to the amendment that the House authorize an expenditure of $500 for the purpose of obtaining legal opinions which may be submitted one year from now. (Not seconded.)

The original motion as amended was then put and carried. In the discussion it was understood that no money shall be expended for this purpose.

As Dr. Lester did not specify the number of the committee in his amendment, Dr. A. E. Baldwin, Illinois, moved that a committee of three be appointed by the President to consider the matter of national incorporation. Seconded.

Dr. Stevens, Pennsylvania, moved to amend that a committee of five be appointed instead of three and that no two members of the committee shall be from the same state.

The amendment was accepted and carried.

Trustees' Report Adopted.—Dr. Moyer said the committee recommends the adoption of the report of the Board of Trustees as a whole, as amended. On motion, this recommendation of the Business Committee was concurred in.

Report of Committee on National Bureau of Medicines and Foods.

Dr. E. Eliot Harris, New York, presented the report of the Committee on the Establishment of a National Bureau of Medicines and Foods.

On motion of Dr. J. N. Jackson, Missouri, the report of the committee was referred to the Business Committee.

Report of Committee on Revision of Code of Ethics.

Dr. E. Eliot Harris, New York, chairman, presented the report of the Committee on Revision of Code of Ethics and offered the following resolutions:

> *Resolved*, That the Special Committee on Revision of the Code of Medical Ethics unanimously recommends that its report be referred to an enlarged committee, consisting of this Special Committee and one delegate from each state not already represented on the Special Committee, to be appointed by the President.
>
> *Resolved*, That the enlarged committee give a hearing to any member of the Association who may desire to appear before it at the St. Charles Hotel on this, Tuesday, evening at 9 o'clock.

Dr. Harris, Illinois, moved that the report of this committee and its resolutions and any amendments pertaining to this subject and now ready to be offered, be referred to the Business Committee for action.

Dr. Wall, Buffalo, moved that the report of the committee be received and that the recommendations be adopted. Seconded.

Dr. Charles A. L. Reed, Ohio, offered a substitute for the report of the committee, and moved its adoption.

It was moved that the substitute report for the Special Committee on the Code of Eth the resolutions offered and the report of the Special Committee, be referred to the Business Committee.

Dr. Reed's resolution was accepted by Dr. Harris, and the report was so referred.

[See report of enlarged committee on page 1379.]

The President called for the report of the Committee on Sections and Section Work.

Dr. L. S. McMurtry, Kentucky, chairman, said that as only two members of the committee were present he requested the privilege of making the report to-morrow, if compatible with the business before the House.

There being no objection the request was granted.

Report of the Committee on Medical Education.

The report of the Committee on Medical Education was read by Dr. Arthur D. Bevan, Illinois, chairman of the committee.

Mr. President and Members of the House of Delegates:

Your Committee on Education, consisting of Floyd W. McRae, Atlanta, Ga.; Rudolph Matas, New Orleans; R. A. Marmion, U. S. Navy, Washington, D. C.; C. A. Daugherty, South Bend, Ind., and Arthur Dean Bevan, chairman, respectfully submit the following report:

THE ORIGINAL PURPOSE IN FOUNDING THE AMERICAN MEDICAL ASSOCIATION.

We desire first to call attention to the fact that the American Medical Association was formed for the purpose of elevating the standard of medical education in this country. The original call of the Medical Society of the State of New York, which led to the formation of the American Medical Association, was as follows:

> WHEREAS, It is believed that a national convention would be conducive to the elevation of the standard of medical education in the United States, and
>
> WHEREAS, There is no mode of accomplishing so desirable an object without concert of action on the part of the medical societies, colleges and institutions of all the states:
>
> *Resolved*, That the New York State Medical Society earnestly recommends a national convention of delegates from medical societies and colleges in the whole Union to convene in the City of New York on the first Monday in May, 1846, for the purpose of adopting some concerted action on the subject set forth in the foregoing preamble.
>
> *Resolved,* That a committee of three be appointed to carry the foregoing resolution into effect.

These delegates met and adopted the following, which resulted in the formation of the American Medical Association:

> First. That it is expedient for the medical profession of the United States to institute a national medical association.
>
> Second. That it is desirable that a uniform and elevated standard of requirements for the degree of M.D. should be adopted by all the medical schools in the United States.
>
> Third. That it is desirable that young men before being received as students of medicine should have acquired a suitable preliminary education.

Your committee find, therefore, that the American Medical Association was founded for the purpose of elevating the standard of medical education in the United States. Your committee believe that this is still one of the important functions of the American Medical Association. In the course of years this object has been largely lost sight of, probably because with a loosely organized body it was difficult to accomplish satisfactory results in this direction. With the new reorganization of the Association into a compact representative body, representing the medical profession of each county and state, your committee feel that the American Medical Association has become the best national instrument to supervise and elevate medical education.

THE IMPOSSIBILITY OF NATIONAL LEGISLATION.

Our form of government in this country, giving to each state the right to control its own affairs subject simply to the limitations imposed by the constitution of the United States, makes it impossible to obtain medical legislation from the national government. A national supervision of some sort is obviously a necessity. In the absence of national governmental control, we believe that national effort to elevate medical education can be made most effective through the agency of the American Medical Association. Your committee believe that it is the duty of the American Medical Association to undertake such national supervision of the matter of medical education, and that it has the influence sufficient to make its regulations effective.

THE NEED OF ELEVATING THE STANDARD.

Your committee find that the standard of medical education in the United States is very uneven, representing the highest and lowest types, as compared with such civilized powers as England, France and Germany. As a whole, it is distinctly lower than in those countries and lower than it should be to meet the requirements of medical science in the present stage of development. With the advances which are rapidly making medicine a science, the study and practice of medicine are becoming year by year important and weighty functions in every community.

Medicine demands a better order of intellect and better preparation than is possessed by the poorer part of the men who are to-day entering its ranks in America. The other great world powers, our competitors in commerce, arts and science, demand in their medical men as a minimum requirement a preliminary education equal to or more than our best high schools, and then five years of medical study. Such requirements are none too high, and we in this country can not much longer afford to remain satisfied with anything in medicine short of the best. We can not, however, obtain such a marked advancement in requirements at once or in one step. Such an advance must gradually be brought about. Many agencies are now actively at work elevating medical education in this country. The great universities with medical departments have some of them advanced their requirements to a higher point than that obtained anywhere else in the world; the examining boards of many states have done much to elevate medical education by their demands; the work of the Association of American Medical Colleges has also been a factor of importance.

The great work, however, of bringing the entire body of the American medical profession up to an acceptable standard will be accomplished not by university presidents or state legislatures, or associations of medical schools, but by the medical profession itself, through its county, state and national associations.

A PLAN SUGGESTED.

The first step in advancing medical education to be taken by the American Medical Association should be the adoption of an educational requirement for membership—i. e., the fixing of a minimum requirement both as to preliminary education and as to medical education. This, in the opinion of your committee, should be:

First. As a preliminary requirement a high school education —i. e., sufficient to enable the student to pass the examinations for entrance to our standard universities.

Second. A four-year medical course of at least seven months in each year. That requirement should become effective within five years and apply to graduates of 1908 and after that date, sufficient notice being thus given to all medical schools of the country to enable them to change their curricula to meet these requirements.

DETAILS OF CARRYING OUT THE PLAN.

As to the best plan of making this effective, your committee believe that this should be accomplished in the following way:

After voting to adopt such educational requirements, the House of Delegates should inform the officials of each state medical society that the American Medical Association has adopted such educational requirements for membership, and suggest that such officials notify each county medical society in their state, with the request that the educational requirement adopted by the American Medical Association be made a part of the constitution of each county medical society. Your committee believes that such action would be practically unanimously taken, and in this simple way the first and longest step in the way of supervising and elevating medical education by the American Medical Association could be accomplished. Because of the amount of work, especially correspondence, made necessary to see that such educational requirement is made a part of the constitution of each county medical society, your committee would suggest that a considerable degree of permanence be given to the committee on education, and that sufficient funds be appropriated to enable such committee to effectively carry on their work.

Your committee would suggest that the educational committee consist of five members serving five years, one to be appointed each year; the first committee to be appointed one for one, one for two, one for three, one for four and one for five years; thereafter, one new man appointed each year.

Your committee would suggest that a sum not exceeding $5,000 each year be appropriated to carry on the work of the committee on education, a part of this to be paid a salaried assistant secretary selected by the committee. We would recommend that the Secretary of the American Medical Association be made *ex officio* a member of this committee and that headquarters of this committee be provided in the office of The Journal Building of the American Medical Association.

THE COMMITTEE'S PROGRAM OF ACTION.

Your committee further suggests that it be the duty of the committee on education to:

1. Secure the adoption of the educational requirements determined on by the American Medical Association by each state medical society, and assist the state medical societies in securing the adoption of these educational requirements by each county medical society.
2. To see to it that all medical schools are thoroughly informed of the educational requirements of the American Medical Association and to urge on such schools as do not demand such requirements the necessity of doing so.
3. To inform themselves as to the requirements and character of work done by each medical school.
4. To inform themselves as to the laws governing the practice of medicine in each state and as to the manner in which these laws are being enforced.
5. To inform the state examining boards and licensing bodies of the educational requirements of the American Medical Association and urge those whose requirements are below those of the American Medical Association to adopt the higher requirement.
6. To inform themselves on all matters pertaining to medical education.
7. To carry out the instructions of the House of Delegates in matters of medical education.
8. To make a full report of their work to the House of Delegates at each annual meeting.

Believing, as did the founders of this Association, that one of the most important functions of the American Medical Association is the elevation and supervision of medical education in this country, your committee ask for your careful consideration of this subject, and urge prompt and effective action along the lines suggested.

On motion of Dr. H. O. Walker, Michigan, the report was referred to the Business Committee.

Amendments to the By-laws.

The next order was the consideration of amendments offered at the last meeting.

Dr. Moyer, Illinois, read the original section of Article 4, Chapter 7 of the By-Laws, regarding the Committee on Nominations. He also read the proposed substitute for it, as follows:

> Nominations for officers shall be by informal ballot in the House of Delegates, unless otherwise ordered, by a majority of the delegates present when such nominations are made. Twenty votes shall be necessary to nominate them, and after the nominations are made, the balloting shall continue until some nominee has received a majority of the votes present. After the second formal ballot the nominee receiving the lowest number of votes shall be dropped, and so on in each successive ballot until an election is had.

On motion of Dr. McCormack this amendment was adopted.

On motion of Dr. McCormack other pending amendments were referred to the Business Committee.

The President called for the report of the Committee on Organization.

Dr. McCormack, Kentucky, chairman, asked for further time, as the committee was not ready to report, which was granted.

Report of the Committee on Association Medal.

Dr. L. S. McMurtry, Kentucky, presented a verbal report of the Committee on Association Medal. He said the chairman of the committee who had preceded him had resigned the chairmanship at the last meeting of the Association. For some reason the committee has not been able to select a prize, and he did not know how successful the committee has been in having applications presented to them. Some time after the meeting at Saratoga he was notified by the Secretary that the President, Dr. Wyeth, had honored him with the chairmanship of the committee. He said there was nothing specific in the act creating the committee as to the conditions required of the essays that are presented or the line of investigation to which the essays shall be directed. There are no specific restrictions under which the award is made, and the committee has no authority under the law, by which it was created, to proceed in the matter. He had not been able to confer with his associates on the committee. He asked that the committee be empowered to go forward and to arrange specifications and details to have the work done, and to present the specifications in The Journal as soon as practicable after the meeting, so as to be able at the next meeting to present material that would be worthy of the award.

On motion of Dr. Vance, Kentucky, the committee was continued and given the power requested.

Report of the Committee on Senn Medal.

Dr. M. L. Harris, Illinois, a member of the Committee on Senn Medal, whose report was called for at this time, said he had been asked by Dr. Dunn, the chairman, who was unavoidably absent, to report the finding of the committee. The members of the committee had carefully considered all of the papers presented to them, and had unanimously found that no paper presented had met the requirements imposed on the awarding of the medal.

On motion the report was accepted.

Report of Committee on Rush Monument.

Dr. Henry D. Holton, Vermont, presented the report of the Committee on Rush Monument Fund as follows:

Philadelphia, May 1, 1903.

To the President and Members of the American Medical Association.

Gentlemen: Your committee on the Rush Monument Fund reports as follows:

At the meeting at Columbus, Ohio, the resignation of the former chairman, Dr. Albert H. Gihon of the U. S. Navy, since deceased, was accepted, and Dr. J. C. Wilson of Philadelphia was appointed to the chairmanship of the committee. The committee at that time consisted of Dr. Henry D. Holton of Vermont and the chairman.

At the meeting at Atlantic City, on the request of the members of the committee as then organized, its membership was increased to five. Drs. Frank Billings of Chicago, Wm. L. Rodman of Philadelphia, and L. D. Bulkley of New York were added to the committee.

The funds in the hands of the treasurer of the committee at that time amounted to about $10,000. In addition to this there was $2,000 contributed by the profession of Pennsylvania, in the custody of Dr. Davis of Pittsburg, and a small sum amounting to about $60 in the custody of the treasurer of the Philadelphia County Medical Society.

Personal efforts were from time to time made by members of the committee to increase this fund, but without success, and various plans having the same end in view were discussed by the members of the committee. Among these were:

First, a further appeal to individual members of the Association and to the profession at large. It was felt that this plan would not prove acceptable and would probably not be attended by success.

Second, it was suggested that the committee should directly appeal to the Trustees of the American Medical Association for an appropriation to this fund, but conference with some members of the Board of Trustees made it evident that such an appeal could not be granted.

Third, and finally, your committee considered the question of appealing to the Congress of the United States for additional funds. This plan was abandoned because it seemed to the committee best that the memorial to Rush should be the direct gift of the profession to the people.

Several months ago it was determined by the committee to ascertain whether or not a suitable monument could be procured with the funds in hand, now amounting with interest approximately to $15,000. The result of negotiations on this subject were satisfactory and the committee has entered into a contract with the Henry Bonnard Bronze Co. of New York City, and through them with Louis R. Metcalfe, Esq., as architect, and R. Hinton Perry, Esq., as sculptor, to erect, on the site originally designated by the Secretary of the Navy on the elevation in the park opposite the U. S. N. Museum of Hygiene, 25th and E streets, Washington, D.C., a monument that shall be satisfactory to the committee and approved by the National Sculpture Society of New York City. This action on the part of your committee has been unanimous and has received the unofficial endorsement of a number of the members of the American Medical Association. It is hoped by the committee that it will receive the favorable consideration of the Association as a body and that the monument to be erected will be creditable as a work of art, an impressive ornament to the locality selected for it and an inspiring memorial of the illustrious member of our profession whose career it commemorates.

Those who have undertaken the work have given reasonable assurance that the monument will be completed and ready for unveiling early in the autumn of the current year.

In conclusion your committee offers the following resolution: That a sum not exceeding $500 be placed to the credit of the committee to defray expenses incidental to the unveiling of the monument, any portion of this sum not being expended to be returned to the treasury of the Association.

All of which is respectfully submitted.

Henry D. Holton, Treasurer.
J. C. Wilson, Chairman.

HENRY D. HOLTON, TREASURER.

In account with Rush Monument Fund.

June 1, 1902—

Cash on hand	$ 219.35
Funds invested in stocks and bonds	12,200.00
Dividends received	417.00
Dividends due June 1, 1903	200.00
Due from Pennsylvania Medical Society	2,00.00
Interest	
	$15,036.35

It was moved by Dr. John B. Roberts, Pennsylvania, that *the report be accepted and referred to the Board of Trustees* with the recommendation that funds be appropriated as asked for. Carried.

Appointment of Enlarged Committee on Revision of Principles of Ethics.

Dr. Moyer, speaking on behalf of the Business Committee, in reference to the report of the Committee on Revision of Code of Ethics, said that the committee recommends that the report, together with the substitute proposed and all matters pertaining thereto, be referred to the larger committees, consisting of a representative from each state that is not now represented, to be appointed by the President, said committee to meet immediately after the adjournment of the House of Delegates for organization.

Dr. McCormack, Kentucky, moved that the larger committee be composed exclusively of members of the House of Delegates. Seconded and carried.

The President thereon appointed the following committee:

Alabama—W. H. Sanders.
Arizona—I. W. Craig.
Arkansas—J. A. Dibrell.
California—C. G. Kenyon.
Colorado—J. N. Hall.
Connecticut—C. S. Rodman.
Delaware—G. W. Marshall.
Dist. of Columbia—G. M. Kober.
Florida—R. D. Murray.
Georgia—F. W. McRae.
Illinois—Frank Billings.
Indiana—Edwin Walker.
Indian Territory—B. F. Fortner.
Iowa—Samuel Bailey.
Kansas—J. E. Minney.
Kentucky—Ap Morgan Vance.
Louisiana—Rudolph Matas.
Maine—S. C. Gordon.
Massachusetts—H. E. Marion.
Michigan—T. A. Felch.
Minnesota—William Davis.
Mississippi—J. C. Hall.
Missouri—J. N. Jackson.
Montana—T. J. Murray.
Nebraska—A. B. Anderson.
New Hampshire—I. J. Prouty.
New Jersey—Charles J. Kipp.
New Mexico—J. F. McConnell.
North Carolina—E. C. Register.
North Dakota—E. M. Darrow.
Ohio—C. A. L. Reed.
Oregon—
Pennysivania—John B. Roberts.
Rhode Island—John Champlin.
South Carolina—Geo. R. Drau.
South Dakota—W. J. Matum.
Texas—H. A. West.
Utah—A. C. Ewing.
Vermont—D. C. Hawley.
Virginia--Stuart McGuire.
Washington—P. W. Willis.
West Virginia—L. D. Wilson.
Wisconsin—W. T. Sarles.
Wyoming—Geo. W. Johnston.

Money for Committee on Scientific Research.

Dr. E. E. Montgomery, Pennsylvania, reported on behalf of the Board of Trustees in regard to the resolution submitted in connection with the report of the Committee on Scientific Research. He said the Board of Trustees moved that the money should be appropriated when the report has been made and accepted by the Association, said report to be the property of the Association.

On motion of Dr. H. Bert Ellis, the report was adopted.

Dr. McCormack moved, in accordance with an announcement made in The Journal, that to-morrow afternoon be set apart for receiving the reports of delegates in the matter of organization in their respective states, and that it be made the special order, after the reading of the minutes.

On motion the House of Delegates then adjourned until 9 a. m. Wednesday.

Wednesday, May 6, Fourth Meeting.

The House of Delegates met at 9:10 a. m. and was called to order by the President.

A quorum was present when the roll was called.

The Secretary read the minutes of the previous meeting, which were approved.

Dr. Moyer, Illinois, on behalf of the Business Committee, reported the order of business for the meeting, and on motion of Dr. Sarles, Wisconsin, the report of the committee was adopted.

Education Committee's Report Accepted and Ordered Printed.

Dr. Moyer, Illinois, reported that the Business Committee had considered the report of the Committee on Education, and begged leave to report as follows: The committee recommends the adoption of the report, and that it be referred to the Board of Trustees, with the endorsement of the House of Delegates.

Dr. Ellis, California, moved the adoption of the report of the Business Committee. Seconded.

Dr. Edwin Walker, Indiana, moved to amend that the report be received, referred to the Board of Trustees, and be printed for circulation. Seconded.

The motion as amended was carried.

Action Postponed on Bureau of Medicines and Foods.

Dr. Moyer stated that the committee had considered the *report of the Provisional Committee* on the Establishment of a National Bureau of Medicines and Foods, and felt that the report, as submitted, was so vague in its provision, so meager in detail, that it recommends it be not adopted. The committee *recommends that the whole matter be referred to the legis*lative committee, to report at the next annual session.

It was moved that the recommendation of the Business Committee be concurred in. Seconded.

After some discussion, which was participated in by Dr. Jones, California, and Dr. Moyer, Illinois, Dr. Harris, Illinois, moved that the matter be recommitted to the original Provisional Committee on the Establishment of a National Bureau of *Medicines and Foods.*

This motion was seconded and carried.

Manila Medical Society Admitted.

Dr. Moyer said the Business Committee had considered the Secretary's report and begged leave to report on certain items, as follows: That the Manila Medical Society be accorded representation on the same basis as a state or territory, providing that their organization be extended to include the Island of Luzon, and such other portions of the Philippines as may organize local medical societies.

It was moved and seconded that the recommendation of the Business Committee be adopted. Carried.

Department of the Interior To Be Represented.

Dr. Moyer stated that the committee recommends that the Secretary be instructed to correspond with the Interior Department, and advise the House of Delegates at the next annual session, with a view of according this service specific recognition.

On motion, the recommendation was concurred in.

Delegate to Canadian Medical Association.

The Business Committee recommends that the President appoint a delegate to represent the American Medical Association at the thirty-sixth annual meeting of the Canadian Medical Association. On motion, the recommendation was adopted.

Secretary's Report Adopted.

The Business Committee recommends the adoption of the report of the Secretary.

It was moved that this recommendation of the Business Committee be adopted. Carried.

Dr. McCormack Praised.

The Business Committee recommends the expression of appreciation of the services of Dr. J. N. McCormack, in reorganizing the profession; it further recommends to the Board of Trustees, a continuation of those services, if Dr. McCormack can be persuaded to continue with the work.

On motion, these recommendations were adopted.

Permanent Committee on Place of Annual Session.

With reference to the item contained in the President's address, in regard to the place of holding the next meeting, the

Business Committee recommends that it be referred to the Committee on Transportation and Place of Session, and that this committee be made a permanent one with the duties suggested by the President.

It was moved that this be adopted. Carried.

Regarding that part of the President's address concerning papers offered in the Section on Materia Medica, Pharmacy and Therapeutics, the Business Committee recommends that it be referred to the Committee on Sections and Section Work.

On motion, the recommendation was concurred in.

Committee on Memorial to Major Walter Reed.

The Business Committee recommends the appointment of a committee of three of the House of Delegates to co-operate with other bodies looking toward placing a suitable memorial in Washington, D. C., commemorating the scientific achievements of Major Walter Reed.

On motion, this recommendation was adopted.

Consideration of Standing of Dental and Pharmaceutic Members.

In reference to the Section on Stomatology, Dr. Moyer, speaking for the Business Committee, said there were two amendments to the Constitution which were proposed last year, and which the Committee had elaborated, and which it recommended for adoption.

Dr. John B. Roberts, Pennsylvania, moved that the amendments be taken up. Carried.

Dr. Moyer then read the following:

Amend Section 6, Article 3, with a section, as follows:

> Dental Associate Members: Dentists who hold the degree of D.D.S. from a reputable dental college, and who are members of recognized local and state dental societies, may be admitted as associate members, on recommendation of the officers of the Section, subject to approval by a majority vote of the members of the Section.

The Business Committee moved, as an amendment to Section 7, Chapter 1, of the By-laws, the following:

> Pharmaceutic Associate Members: Pharmacists who are recognized graduates of pharmaceutic schools or colleges and are members of the American Pharmaceutical Association, may be admitted as associate members, on recommendation of the officers of the Section on Materia Medica, Pharmacy and Therapeutics, subject to approval by a majority vote of the members of the Section

It was moved that the amendment recommended by the Business Committee in regard to associate dental members be adopted. Carried.

It was moved that the amendment in reference to associate members of pharmacy be adopted. Seconded.

Dr. Hill, Wisconsin, moved, as a substitute, that action on the amendment of the Business Committee, in reference to associate members of pharmacy be postponed until the committee had received a recommendation from that section. Seconded and carried.

[Both of the above amendments were revised later.]

Minor Amendments to Constitution.—Under the head of proposed amendments, Dr. Moyer said the first amendment is in regard to Section 1, Article 4, of the Constitution, as follows: After the word "service" at the end of paragraph, add

> And (4) the officers of the Association.

He said the Business Committee recommended as a substitute for that this wording, to follow the word "service":

> The Board of Trustees shall be members of the House of Delegates, but shall not vote.

On motion of Dr. McCormack, this recommendation was adopted.

The next amendment relates to Article 8, Section 4, as follows: Strike out all after the word "to" in the second line, and insert:

> The office of President or Vice-President.

The Business Committee recommended the adoption of this amendment, and on motion the recommendation was concurred in.

A third amendment was with reference to Section 3, Chapter 9, of the By-laws. The committee reported, as a substitute, that the wording of this section read:

> Each Section shall have the privilege of sending to the House of Delegates one delegate.

On motion of Dr. McCormack the amendment was adopted.

The next amendment related to Section 5, Chapter 3, of the By-laws.

The Business Committee recommended that this section be repealed.

It was moved that this recommendation be adopted. Carried.

Quorum of the House Defined.—The next amendment related to Section 10, Chapter 3, namely, to strike out the word "majority" and insert the word "twenty-five" in its place. The section would then read:

> Twenty-five members composing the House of Delegates shall constitute a quorum for the transaction of business; provided, that at any *adjourned session* of any annual meeting, ten members shall constitute a quorum.

It was moved that the amendment be adopted. Seconded.

Dr. Bishop, Pennsylvania, suggested that the amendment read:

> Twenty-five delegates representing states.

Dr. Wall, Buffalo, offered as an amendment the following addition:

> Such adjourned meeting shall not initiate new business or change that which has been adopted.

Seconded.

Dr. Bert Ellis, California, moved that the amendment be referred back to the Business Committee. Carried.

The next amendment related to Section 3, Chapter 9, of the By-laws. At present it reads:

> In each Section a nominating committee of three members shall be elected by open ballot on the first day to make nominations for Section officers.

The Business Committee recommended that this amendment to the By-laws be sent to the Committee on Sections and Section Work for consideration and report.

On motion, the recommendation was adopted.

House of Delegates Meetings Defined.—Amendment to Section 3, Chapter 8, of the By-laws. The present section reads:

> The House of Delegates shall hold its first meeting of each annual session at 2 p. m. of the first day, and on subsequent days, at such time as may be necessary to complete its business, provided that it shall not meet at hours that will conflict with the general meetings of the Association.

The proposed amendment is:

> The House of Delegates shall meet at 10 o'clock on the day before that fixed as the first day of the annual session. It may adjourn from time to time as may be necessary to complete its business, provided, that it shall not meet at hours that conflict with the general meetings of the Association.

The Business Committee reported favorably on this amendment, and recommended its adoption.

On motion, the recommendation was adopted.

Limiting Number of Section Papers.—Amendment to Section 5, Chapter 9 of the By-laws:

> The number of papers on the program of any Section shall not exceed forty. No member shall read papers before more than two Sections at any session, and these papers must be on different subjects.

The Business Committee recommended the adoption of this amendment, and on motion the recommendation was concurred in.

Report of Committee on Legislation.

Dr. H. L. E. Johnson, Washington, D. C., presented the report of the *Committee on Legislation*, as follows:

The Committee on Legislation has the honor to make the following report for the year ending May, 1903: During the last session of the National Congress an antivivisection bill was introduced in the Senate, and your committee, acting promptly, secured sufficient support to impede effectually its official consideration and prevent its passage by that body. We respectfully ask the Association to approve our action on this measure, and disapprove the introduction of this or similar bills or measures in the future.

Under the present Constitution and By-laws your committee is regulated by the following:

> The committee on legislation shall report to the House of Delegates at each annual session its proceedings during the previous year, and recommend such action in respect to pending legislation as it shall deem proper. [See page 11, *Constitution and By-laws.*]

We regret very much the limitations placed on this committee by the above, and respectfully suggest legislation by the House of Delegates which will *give the Committee* on National Legislation more latitude and authority in dealing with medical legislation, both state and National.

Respectfully submitted, H. L. E. Johnson, Chairman.

On motion of Dr. McCormack, the report was referred to the Business Committee.

Report of Committee on Scientific Exhibit.

Dr. Frank B. Wynn, Indiana, presented the report of the Committee on Scientific Exhibit:

The chairman's address before the Section on Pathology and Physiology a year ago was devoted largely to a consideration of the future of the Pathologic Exhibit. It was recommended that the name be changed to Scientific Exhibit and that the work be placed in entire charge of a director, who should be selected by the Board of Trustees and paid reasonable compensation for his services. Your honorable body took favorable action on these recommendations, but suggested for good reason a postponement of the selection of a director for one year. The present Scientific Exhibit, therefore, was prepared under the old régime and has not been without embarrassments. With less than three months' time in which to accomplish the labor the committee has met the frequent excuse of lack of time; others have protested against taking material to so remote a point, insisting that territory contiguous to the place of meeting should provide the exhibit. Despite the remoteness of the meeting place from sources of pathologic supply, the loyal, saving remnant of the profession has come nobly to the rescue. It is a pleasure to place on this roster of honor the following names:

W. S. Thayer, Thomas S. Cullen, and Harry T. Marshall, Baltimore; E. R. LeCount, Winfield S. Hall, F. Robert Zeit, W. T. Eckley, James Nevins Hyde, F. H. Montgomery, L. E. Schmidt, and —— Harris, Chicago; Willard Bartlett, W. J. Calvert, St. Louis; O. L. Pothier, New Orleans; Frank B. Wynn and J. S. Wright, Indianapolis; H. J. Whitacre, John Miller and M. L. Heidingsfeld, Cincinnati; Calvin DeWitt, Washington; George Adami and M. E. Abbott, Montreal; E. B. Barnett, Havana; Jay F. Schamberg and Mihran K. Kassabian, Philadelphia; Robert Winthrop Gillman, Detroit; H. D. Vallin, St. Peter, Minn.; and W. S. Carter, Galveston.

It is not the province of this report to deal with the details of the Exhibit. Particulars will appear at a later date. It is sufficient to say that in point of excellence and efficiency the collection equals any previously given. Thirty odd exhibitors are participants. Especially to be thanked are those from distant points. In the list are to be noted those of national distinction as well as younger men fired with the true zeal, and laying the foundation for achievement in scientific medicine.

It has been found from experience that $500 is ample to cover the expense of the Scientific Exhibit if economically administered. It is recommended that this sum be appropriated annually.

All true physicians contribute more or less to the public weal in matters of hygiene and sanitary science. The ethical spirit prompts us to share without money and without price whatever knowledge we may gain in the healing of the sick. A small band is always to be found within our ranks, earnest, unselfish and untiring; willing to sacrifice time, labor and money in the furtherance of the higher ideals in medicine. Such make possible the Scientific Exhibit. To them are due not alone the praise of "well done," but the moral and material support of this body.

Following the natural and desirable tendency, the effort has been to condense and specialize the Exhibit with reference to location of the meeting places and topics to be prominently considered in the section work. With that end in view tropical diseases have received particular attention. Fine groups of specimens are shown, illuminating amebic and bacillary dysentery and excellent series of tuberculous and typhoid lesions for purposes of differentiation from the former. Excellent series are also shown illustrating malaria, yellow fever and plague. Related to surgery are very complete groups illustrative of surgical diseases of the kidney, bladder and prostate gland. Gynecologic effort has been directed toward the illumination of fibroid tumors and ectopic gestation. The realm of otology is represented by a fine series related to mastoid disease. The dermatologic group is directed chiefly to the illumination of the exanthemata. Besides these groups there are shown a large number of rare and beautiful miscellaneous specimens. Noteworthy exhibits are presented showing apparatus and the work of medical students as conducted under the most approved modern methods. The latter include physiologic experimentation and studies in clinical diagnosis, particularly with reference to the excreta.

It is deeply to be regretted that it has not been possible to arrange for the demonstration of the specimen groups before the respective sections, at stated hours, indicated on the published program. Most certainly this should be done in the future. In the preparation of the annual program, a competent director, in conjunction with the section officers as an advisory committee, will be able to correlate the work of the Exhibit with that of the sections. He will vary the character of the Exhibit from year to year, according to the place of meeting, tendencies in the medical world and to suit the topics of importance to come before the various sections. By this means the Scientific Exhibit will be made practically effective and the Association membership will come to realize that it is not, as many are prone to suppose, a mere adjunct of the Section on Pathology and Physiology, but belongs to the whole Association; that it is a valuable practical feature of the organization in which all reap profit. Further than mentioned it will fall to the director of the Exhibit to see that carefully prepared data are submitted with specimens and demonstrations. He should edit the same for publication and preservation in the archives of the Association. A small volume might be published each year containing a catalogue of the exhibits, clinical and descriptive data, plates, etc., which would become valuable for purposes of reference. Funds might with propriety be placed in his hands for the encouragement of research exhibits.

As stated on a previous occasion the Scientific Exhibit is in harmony with the spirit of the age which demands brevity; calls for facts rather than theories, and deeds rather than words. Contact of the man of pure science with him who applies scientific knowledge to practice, will tend to prevent narrowness and antagonisms on the one hand, and on the other prove conducive to harmony and mutual upbuilding. The mission of the physician is to minister to the suffering and heal the sick. Of this cardinal fact scientists should not lose sight. And on the part of clinicians there is need of appreciating more fully the great assistance afforded them by a practical knowledge of pathology and physiology. Whether a specimen be presented in the exhibit of the American Medical Association, in the state medical society or in a county medical society, the practical lesson taught is the same. Summed up it is that a practical knowledge of pathology constitutes the most substantial basis for skill in diagnosis. The physician reading a paper, reporting a case or presenting a specimen is, to be sure, rendering a service to his colleagues. He confers on himself a much greater benefit. The knowledge begotten in the labor becomes a joy and a blessing like his own child. This, and the consciousness of high purpose and duty well done, are the rewards of the scientific worker, which, in a measure, compensate for the meager financial return which is too often his lot.

Dr. Bishop, Pennsylvania, moved that the report be referred to the Business Committee; that this committee make its recommendation, then refer the report to the Board of Trustees and obtain a report of the board, so that the two reports can be made at one time, and thus save much time. Carried.

Report of Judicial Council.

Dr. N. S. Davis, Jr., Illinois, read the report of the Judicial Council, as follows:

The Judicial Council reports that letters were read from J. Austin Willis of Oakland, Cal., and from W. T. Salmon of Oklahoma City, and from doctors of San Diego, Cal., signed by J. C. Hearne and others. These letters asked for decisions on hypothetical cases. The council can only consider genuine cases properly referred to it; therefore, on motion, the council voted that the above letters of inquiry be referred back to the writers, and recommends that such matters should come through the county and state societies.

Philip Marvel, Chairman.

Report of Committee on Public Health.—The President called for the report of the Committee on Public Health.

Dr. H. A. West, Texas, a member of this committee, said that the duties of this committee were not well defined. In his correspondence with the chairman of the committee, his suggestion was, that matters concerning the public health should be referred to this committee, and that the committee was to serve merely in an advisory capacity as to the work to be referred to it.

Five Dentists Made Associate Members.—Dr. A. E. Baldwin, Illinois, in accordance with amendment to Section 5, Article 4, of the Constitution, in regard to associate members, recommended that the following be made associate members of the Section on Stomatology: C. V. Vignes, C. Edmund Kells, Paul de Verges, Jules J. Sarrazin, E. T. Belden.

On motion the Committee on Organization was authorized to codify the Constitution and By-laws and to correct any typographic errors contained therein.

Dr. M. L. Harris, Illinois, offered the following amendments:

Amendment to Chapter 12, Section 2, by eliminating the ection in its entirety.

Article 11 and Chapter 14 should each read:

> Three-fourths of the members present.

Article 9:

> The House of Delegates may recommend the appropriation of unds in accordance with, etc.

Moved to amend the Constitution and By-laws, so as to place the Association on the assessment plan, in accordance with the plan already adopted by many of the state societies.

The Sanders Resolutions on Public Health System.

Dr. W. H. Sanders offered resolutions, which were referred to the Business Committee:

> WHEREAS, The protection of the people from disease is the greatest aim of all true physicians; therefore, be it resolved by the American Medical Association,
>
> 1. That to formulate a complete, coherent, and constitutional public health system for this country be declared one of the most important achievements to which this body can devote itself.
>
> 2. That immediate steps be taken to construct such a system, and to submit it for adoption by the people of the states and of the nation.

To Have Standing Committee Reports Printed Before Session for Distribution.

Dr. Edwin Walker, Indiana, offered the following:

> *Resolved*, That all reports of standing committees shall be transmitted to the Secretary ten days before the annual session of the House of Delegates, and that all such reports shall be presented for distribution to the members of the House of Delegates.

This was referred to the Business Committee.

Association Petitions President Roosevelt to Appoint Medical Officer on Isthmian Canal Board.

Dr. W. H. Welch, Baltimore, introduced the following:

> Inasmuch as the construction of the Isthmian Canal is through a region in which, without energetic sanitary control there is sure to be enormous loss of human life from preventable diseases, particularly from pernicious malaria, and yellow fever, as well as great waste of energy and of money from disabilities caused by such diseases; and inasmuch as the measures for the restraint of these diseases, which have already achieved even their extermination in Cuba under American administration, require expert knowledge, based on practical familiarity with tropical diseases, experience in the application of these measures, and large authority in their administration, therefore,
>
> *Resolved*, That the American Medical Association begs most respectfully and earnestly to call to the attention of the President of the United States the importance of appointing as a member of the Isthmian Canal Commission a medical man possessed of the qualifications indicated. The Association is convinced that the mere employment of such a sanitary expert by the Commission will not be likely to secure the desired results.
>
> *Resolved*, That the Secretary of the Association transmit a copy of these resolutions to the President of the United States.

This was referred to the Business Committee.

On motion of Dr. Le Grande, Alabama, the Committee on Transportation and Place of Session was urged to have its report ready for presentation the first thing to-morrow morning.

Dr. Moyer, Illinois, said the Business Committee had neglected to recommend the adoption of the President's report. He moved that the report be adopted. Carried.

On motion of Dr. McCormack, Kentucky, secretaries of their respective state societies were invited to be present to discuss the subject of organization at the afternoon session and that, in the absence of the secretary, the president of the state society be invited to do so. Carried.

On motion the house then adjourned until 2 p. m.

WEDNESDAY, MAY 6—FIFTH MEETING.

The House of Delegates reconvened at 2:30 p. m., and was called to order by the President.

The Secretary called the roll, and there was a quorum present.

The Business Committee reported the order of business for the meeting, and on motion the report was accepted.

Pharmacists Again Considered.—Dr. Moyer, Illinois, speaking for the Business Committee, said that the committee had considered the amendment to Article 3, Section 7, of the By-laws, which was referred back to it, on pharmaceutic associate members, and begged leave to report as follows: The committee moves to amend, by striking out the words "graduates of recognized pharmaceutic schools and colleges" and inserting the word "reputable" before the word "pharmacists." The committee recommended this for adoption and, on motion of Dr. Hill, Wisconsin, the recommendation was concurred in. [See further modification below.]

Regarding the second amendment referred back to the Business Committee, which relates to Chapter 3, Section 10, of the By-laws, the committee recommended substituting the words "twenty-five of the voting members," so that the section, as amended, shall read:

> Twenty-five of the voting members composing the House of Delegates shall constitute a quorum for the transaction of business, provided, that at adjourned session, of any annual meeting, ten members shall constitute a quorum.

The committee also recommended the addition of these words:

> Such adjourned meeting shall not initiate new business or change that which has been adopted.

On motion of Dr. Wall, Buffalo, the recommendations of the committee were concurred in.

Dr. Moyer, speaking for the Business Commitee, said the report from the Section on Stomatology, in reference to associate members, required no action; that the adoption of the by-law, in reference to associate members, made them members in accordance with its provisions, if properly elected by the Section.

Isthmian Canal Resolutions Adopted.

The Business Committee reported favorably on the resolution offered by Dr. William H. Welch in reference to the sanitary construction of the Isthmian Canal, and recommended for adoption the resolution.

The recommendation was concurred in and, on motion of Dr McCormack, the resolution adopted.

In reference to the resolution offered by Dr. W. H. Sanders, Alabama, the committee recommended that it be referred to the Committee on Public Health, and on motion it was so ordered.

Printed Reports Adopted.

With reference to the resolution offered by Dr. Edwin Walker, Indiana, the Business Committee recommended that it be adopted; that the Secretary instruct the various committees to transmit their reports to him ten days before the annual session, that they may be printed.

On motion the recommendation was agreed to.

Legislation on Antivivisection Endorsed.

In reference to the first part of the report of the Committee on Legislation, which deals with the antivivisection bill, the Business Committee recommended it for adoption. The committee felt that this should be adopted, with the strongest possible endorsement by the House of Delegates.

On motion the recommendation of the Business Committee was adopted.

Dr. Moyer then offered the following resolution on behalf of the Business Committee:

> *Resolved*, That the American Medical Association approves the action of its committee in defeating the antivivisection bill recently pending before Congress, and that Congress be strongly urged to give no further consideration to legislation of that character in the future.

Seconded and carried.

Regarding the remaining portion of the report of the Committee on Legislation, which relates to the somewhat anomalous position in which the committee finds itself, the Business Committee recommended that this part of the report be referred back to the Committee on Organization and Codification of the Constitution and By-laws.

On motion the recommendation was adopted.

Dr. Wall, New York, introduced the following resolution:

> *Resolved*, It shall be a standing rule of the Association that no amendment or change in the Constitution and By-laws shall be acted on until it shall have been presented at a previous annual session.

This was referred to the Business Committee.

Report of Organization Committee—Forty-Four State Representatives Report.

Dr McCormack, Kentucky, chairman, read the report of the Committee on Organization.

At the conclusion of the report, representatives of forty-four states and territories made brief but very encouraging reports of the excellent work that is being done in reorganizing the medical profession throughout the country.

On motion the report of the Committee on Organization and the reports made by representatives of the respective states and territories were adopted, and a vote of thanks extended to the chairman, Dr. McCormack.

Money for Committee on Organization.

Dr. Charles A. L. Reed offered the following resolution, which was adopted:

Resolved, That with the concurrence of the Board of Trustees, $500, or so much thereof as may be necessary, shall be appropriated from the treasury, to pay the necessary expenses of the Committee on Organization.

On motion the House of Delegates then adjourned until 9 a. m., Thursday.

Thursday, May 7—Sixth Meeting.

The House of Delegates met at 9:20 a. m. and was called to order by the President.

The Secretary called the roll, and there was a quorum present.

The Secretary read the minutes of the two previous meetings, which, after some corrections had been made, were approved.

Dr. Moyer, Illinois, representing the Business Committee, reported on the order of procedure for the day, and on motion the report was adopted.

The Business Committee requested that the amendments to the By-Laws which were adopted relative to dental and pharmaceutic associate members be sent back to the committee for further consideration.

Dr. Moyer, Illinois, moved that the vote by which these amendments were adopted at a previous meeting be reconsidered. Carried.

Dr. Moyer, Illinois, then moved that the amendments be referred back to the Business Committee for further consideration. Carried.

Appropriation for Scientific Exhibit.

The Business Committee, to which was referred the matter of Scientific Exhibit, with instructions that the committee confer with the Board of Trustees relative to an appropriation necessary to continue the work of that committee, reported that the committee had had a conference and the trustees had advised that an appropriation not to exceed $500 be made and that, further, the Board of Trustees recommend the adoption of the committee's report.

It was moved and seconded that the recommendation of the Business Committee and of the Board of Trustees be adopted. Carried.

Amendments Must Lie Over One Year.

In reference to the standing resolution offered by Dr. Wall, Buffalo, at the last meeting, the committee begs to report favorably and to offer the following resolution:

Resolved, It shall be a standing rule of the Association that no amendment or change in the Constitution or By-Laws shall be acted on unless it shall have been presented at a previous annual session.

The committee moved its adoption. Seconded and carried.

Congress on Venereal Diseases at St. Louis Fair in 1904.

The Business Committee had considered carefully the question of the report of the Committee on Prophylaxis of Venereal Diseases and the proposal to hold a congress during the Louisiana Purchase Exposition and reported favorably on the report of the committee. Furthermore, the committee offered the following resolution:

1. The present Committee on Prophylaxis of Venereal Diseases to be continued and act as the central committee.

2. A co-operative committee be created, composed of one member for each state, to be appointed by the president of each state medical organization.

3. This central committee, with the approval of the co-operative committee, be authorized to organize and provide for a Congress for the Prophylaxis of Venereal Diseases during the existence of the Louisiana Purchase Exposition, to be held at St. Louis, with representatives of the Army, Navy and Public Health Service.

4. The central committee, with the approval of the co-operative committee, be directed to select officers to be presented to the proposed congress for action.

5. Each member of the co-operative committee is directed and expected to create an interest in his own state in the proposed congress.

6. The central committee is authorized to select from the officers of the Louisiana Purchase Exposition a suitable place for the meetings of the congress.

7. The legislative committee of the American Medical Association, in Washington, is directed to seek to secure an appropriation from the Congress of the United States of $5,000 for the expenses of the proposed congress.

8. A sum not to exceed $500 is recommended to be appropriated by the Board of Trustees of the American Medical Association for the expenses of the preparation of this congress, as proposed at the meeting of the House of Delegates Monday afternoon, May 4.

The Business Committee moved the adoption of the report of the committee, and on motion the report and resolution were adopted.

Dental and Pharmaceutic Members Provided For.

Dr. Moyer said the Business Committee was prepared to report in regard to the amendment to the By-Laws concerning dental members. He said they were described as "dental associate members." This was a mistake. They should be known simply as "dental and pharmaceutic members." The Association had associate members who should be kept distinct, and the word "associate" following the words "dental and pharmaceutic" was unnecessary The amended section reads:

Article 3, Section 6. Dental Members.—Dentists who hold the degree of D.D.S. from a reputable dental college and who are members of a recognized local or state dental society, may be admitted as dental members on recommendation of the officers of the Section on Stomatology and approval by a majority vote of the Section, the names of such members to be sent to the Secretary by the Secretary of the Section.

The Business Committee moved the adoption of this amendment. Carried.

Regarding Article 3, Section 7 of the By-Laws, the Business Committee recommended the following amendment, which was adopted:

Reputable pharmacists may be admitted as pharmaceutic members on recommendation of the officers of the Section on Materia Medica, Pharmacy and Therapeutics, subject to approval by a majority vote of the members of the Section, the names of such members to be sent to the Secretary by the Secretary of the Section.

Supplementary Report of the Board of Trustees.

Dr. T. J. Happel, president of the Board of Trustees, said: *I wish to make a supplementary* report of some of the work done by the Board of Trustees since the meeting of the Association in regard to matters that should be reported to the House of Delegates.

MONEY FOR SCIENTIFIC RESEARCH.

1. We have had presented to us several accounts. Five hundred dollars was asked for by the House of Delegates, to be appropriated for the use of the Committee on Scientific Research. The action of the Board of Trustees in regard to that matter is that the money has not yet been earned by the parties to whom the work has been assigned, but it will be paid when certified to properly by the chairman of the Committee on Scientific Research and presented to the chairman of the Board of Trustees.

SECTION SECRETARIES' EXPENSES ALLOWED.

2. Bills have been presented to the Board of Trustees, through the House of Delegates, from the secretaries of sections, ranging in amount from the sum of $4 up to a maximum of $15. These have been allowed and will be paid.

NATIONAL ORGANIZER CONTINUED.

3. The Board of Trustees would report that Dr. J. N. McCormack has been continued as organizer for the next twelve months on terms satisfactory to himself and the Board of Trustees.

UNVEILING RUSH MONUMENT.

4. In regard to the Rush monument, the board has been asked for an allowance of $500, or not to exceed that amount, to be used in defraying the expenses of unveiling the Rush monument. The board has willingly and gladly appropriated that sum which has been asked for, but not to exceed $500.

INDEFINITE APPROPRIATIONS BARRED.

5. The Board of Trustees wishes to emphasize a matter that is mentioned in its report which has been presented in printed form, namely, that no indefinite appropriation will be made by the Board of Trustees. In case a committee is appointed to do work and there is not a specific sum of money stated as an approximate amount to be expended by such committee, the board will not be authorized to meet any expenses connected with it. The board does not wish to be considered arbitrary in such matters, but, as custodians of the funds, the board wishes a limitation fixed by the House on any appropriation, and then it will be acted on.

COMMITTEE ON FOOD AND DRUGS BILL.

6. A bill was presented to the Board of Trustees by Cooley, Lewis & Elgas, attorneys, for legal opinion on account of the Committee on Food and Drugs on the question of the legality to elect trustees of the proposed corporation until such persons have been selected by the American Medical and the American Pharmaceutical Associations. The board can find no record of having appropriated money for securing legal opinion for this purpose, hence this account is disallowed.

SUPPLY OF THE NEW BUTTONS.

7. In regard to the matter of buttons, we believe the House of Delegates has already adopted the suggestion made by the Board of Trustees in regard to the button, and the board has directed me to report that a supply of buttons will be made in accordance with the suggestions of the board. These buttons can be procured at an approximate cost by all who do not possess them, and on the terms the Editor has been sending them out.

8. The account in connection with the Committee on Reorganization has been allowed.

9. The Board of Trustees has continued the appropriation of $500 for the use of the Committee on Scientific Exhibit as heretofore.

On motion of Dr. Charles A. L. Reed, Ohio, the supplementary report of the Board of Trustees was adopted.

Report of the Committee on Medical Ethics.

The next order was the report of the Enlarged Committee on Revised Code of Ethics.

Dr. E. Eliot Harris, New York, read the following report:

To the President and Members of the House of Delegates of the American Medical Association:

Your enlarged Committee on Medical Ethics, consisting of the special committee and one delegate from each state, have unanimously adopted the following report, entitled the "Principles of Medical Ethics of the American Medical Association," which is herewith submitted.

The following report of the Special Committee shall be printed as an explanatory preface to the Principles of Medical Ethics of the American Medical Association.

Gentlemen: Your committee has given extended and careful thought to the proposed revision of the Code of Medical Ethics referred to it for consideration. As you will note on reference to the caption of the report the word "code" has been eliminated and the expression "Principles of Medical Ethics of the American Medical Association" adopted as adequately descriptive. In reference to this change, it is proper to say that such action on its part is based on the idea that the American Medical Association may be conceived to occupy some such relation to the constituent state associations as the United States, through its Constitution, holds to the several states. The committee, for this reason, regards it as wiser to formulate the principles of medical ethics, without definite reference to "code" or penalties, thus leaving the respective states, to form such code, and establish such rules as they may regard to be fitting and proper, for regulating the professional conduct of their members, provided, of course, that in doing so there shall be no infringement on the established ethical principles of this Association. The committee regard as wise and well intended to facilitate the business of the parent organization and promote its harmony this course which leaves to the state association large discretionary powers concerning membership and other admittedly state affairs. Your committee has retained, to a large extent, the phraseology of the existing code, while aiming at condensation of expression and a better understanding of some of its statements. The report of the committee has been reached unanimously, without dissension or distrust on the part of its members, each aiming to formulate a result based on principle alone, and without regard to any past or present disagreements or misunderstandings whatsoever; such being the case, the committee invites your candid and unprejudiced attention to the results of its labor, feeling that at least some good has been accomplished.

Respectfully submitted,
E. Eliot Harris, Chairman.
William H. Welch.
T. J. Happel.
Joseph D. Bryant.

Principles of Medical Ethics.

The American Medical Association promulgates as a suggestive and advisory document the following:

Chapter I.—The Duties of Physicians to Their Patients.

Section 1.—Physicians should not only be ever ready to obey the calls of the sick and the injured, but should be mindful of the high character of their mission and of the responsibilities they must incur in the discharge of momentous duties. In their ministrations they should never forget that the comfort, the health and the lives of those entrusted to their care depend on skill, attention and fidelity. In deportment they should unite tenderness, cheerfulness and firmness, and thus inspire all sufferers with gratitude, respect and confidence. These observances are the more sacred because, generally, the only tribunal to adjudge penalties for unkindness, carelessness or neglect is their own conscience.

Sec. 2.—Every patient committed to the charge of a physician should be treated with attention and humanity, and reasonable indulgence should be granted to the caprices of the sick. Secrecy and delicacy should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted, in their professional visits, should be guarded with the most scrupulous fidelity and honor.

Sec. 3.—The obligation of secrecy extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance should ever be divulged by physicians, except when imperatively required by the laws of the state. The force of the obligation of secrecy is so great that physicians have been protected in its observance by courts of justice.

Sec. 4.—Frequent visits to the sick are often requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, and to meet promptly every change which may occur. Unnecessary visits are to be avoided, as they give undue anxiety to the patient; but to secure the patient against irritating suspense and disappointment the regular and periodical visits of the physician should be made as nearly as possible at the hour when they may be reasonably expected by the patient.

Sec. 5.—Ordinarily, the physician should not be forward to make gloomy prognostications, but should not fail, on proper occasions, to give timely notice of dangerous manifestations to the friends of the patient; and even to the patient, if absolutely necessary. This notice, however, is at times so peculiarly alarming when given by the physician, that its deliverance may often be preferably assigned to another person of good judgment.

Sec. 6.—The physician should be a minister of hope and comfort to the sick, since life may be lengthened or shortened not only by the acts but by the words or manner of the physician, whose solemn duty is to avoid all utterances and actions having a tendency to discourage and depress the patient.

Sec. 7.—The medical attendant ought not to abandon a patient because deemed incurable; for, continued attention may be highly useful to the sufferer, and comforting to the relatives, even in the last period of the fatal malady, by alleviating pain and by soothing mental anguish.

Sec. 8.—The opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of evil conduct ought never to be neglected. Good counsels, or even remonstrances, will give satisfaction, not offense, if they be tactfully proffered and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

Chapter II.—The Duties of Physicians to Each Other and to the Profession at Large.

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

Section 1.—Everyone on entering the profession, and thereby becoming entitled to full professional fellowship, incurs an obligation to uphold its dignity and honor, to exalt its standing and to extend the bounds of its usefulness. It is inconsistent with the principles of medical science and it is incompatible with honorable standing in the profession for physicians to designate their practice as based on an exclusive dogma or a sectarian system of medicine.

Sec. 2.—The physician should observe strictly such laws as are instituted for the government of the members of the profession; should honor the fraternity as a body; should endeavor to promote the science and art of medicine and should entertain a due respect for those seniors who, by their labors, have contributed to its advancement.

Sec. 3.—Every physician should identify himself with the organized body of his profession as represented in the community in which he resides. The organization of local or county medical societies, where they do not exist, should be effected, so far as practicable. Such county societies, constituting as they do the chief element of strength in the organization of the profession, should have the active support of their members and should be made instruments for the cultivation of fellowship, for the exchange of professional experience, for the advancement of medical knowledge, for the maintenance of ethical standards, and for the promotion in general of the interests of the profession and the welfare of the public.

Sec. 4.—All county medical societies thus organized ought to place themselves in affiliation with their respective state associations, and these, in turn, with the American Medical Association.

Sec. 5.—There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to the patients, as without it their respect and confidence can not be commanded, and to the profession because no scientific attainments can compensate for the want of correct moral principles.

Sec. 6.—It is incumbent on physicians to be temperate in all things, for the practice of medicine requires the unremitting exercise of a clear and vigorous understanding; and in emergencies—for which no physician should be unprepared—a steady hand, an acute eye, and an unclouded mind are essential to the welfare and even to the life of a human being.

Sec. 7.—It is incompatible with honorable standing in the profession to resort to public advertisements or private cards inviting the attention of persons affected with particular diseases; to promise radical cures; to publish cases or operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to employ any of the other methods of charlatans.

Sec. 8.—It is equally derogatory to professional character for physicians to hold patents for any surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances; to assist unqualified persons to evade the legal restrictions governing the practice of medicine; or to dispense, or promote the use of, secret medicines, for if such nostrums are of real efficacy, any concealment regarding them is inconsistent with beneficence and professional liberality, and if mystery alone give them public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or other substances used therapeutically.

ARTICLE II.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.

Section 1.—Physicians should not, as a general rule, undertake the treatment of themselves, nor of members of their family. In such circumstances they are peculiarly dependent on each other; therefore, kind offices and professional aid should always be cheerfully and gratuitously afforded. These visits ought not, however, to be obtrusively made, as they may give rise to embarrassment or interfere with that free choice on which such confidence depends.

Sec. 2.—All practicing physicians and their immediate family dependants are entitled to the gratuitous services of any one or more of the physicians residing near them.

Sec. 3.—When a physician is summoned from a distance to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to traveling expenses and to the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relatives.

Sec. 4.—When more than one physician is attending another, one of the number should take charge of the case, otherwise the concert of thought and action so essential to wise treatment can not be assured.

Sec. 5.—The affairs of life, the pursuit of health and the various accidents and contingencies to which a physician is peculiarly exposed sometimes require the temporary withdrawal of this physician from daily professional labor and the appointment of a colleague to act for a specified time. The colleague's compliance is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician.

ARTICLE III.—THE DUTIES OF PHYSICIANS IN REGARD TO CONSULTATIONS.

Section 1.—The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet the emergencies of disease or accident.

Sec. 2.—Consultations should be promoted in difficult cases, as they contribute to confidence and more enlarged views of practice.

Sec. 3.—The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, and this is generally practicable, for society has been so considerate as to allow the plea of a professional engagement to take precedence over all others.

Sec. 4.—As professional engagements may sometimes cause delay in attendance, the physician who first arrives should wait for a reasonable time, after which the consultation should be considered as postponed to a new appointment.

Sec. 5.—In consultations no insincerity, rivalry, or envy should be indulged; candor, probity and all due respect should be observed toward the physician in charge of the case.

Sec. 6.—No statement or discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending, or by their common consent; and no opinions or prognostications should be delivered which are not the result of previous deliberation and concurrence.

Sec. 7.—No decision should restrain the attending physician from making such subsequent variations in the mode of treatment as any unexpected change in the character of the case may demand. But at the next consultation reasons for the variations should be stated. The same privilege, with its obligation, belongs to the consultant when sent for in an emergency during the absence of the family physician.

Sec. 8.—The attending physician, at any time, may prescribe for the patient; not so the consultant, when alone, except in a case of emergency or when called from a considerable distance. In the first instance the consultant should do what is needed, and in the second should do no more than make an examination of the patient and leave a written opinion, under seal, to be delivered to the attending physician.

Sec. 9.—All discussions in consultation should be held as confidential. Neither by words nor by manner should any of the participants in a consultation assert or intimate that any part of the treatment pursued did not receive his assent.

Sec. 10.—It may happen that two physicians can not agree in their views of the nature of a case and of the treatment to be pursued. In the event of such disagreement a third physician should, if practicable, be called in. None but the rarest and most exceptional circumstances would justify the consultant in taking charge of the case. He should not do so merely on the solicitation of the patient or friends.

Sec. 11.—A physician who is called in consultation should observe the most honorable and scrupulous regard for the character and standing of the attending physician, whose conduct of the case should be justified, as far as can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in the attending physician.

ARTICLE IV.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

Section 1.—Medicine being a liberal profession, those admitted to its ranks should found their expectations of practice especially on the character and the extent of their medical education.

Sec. 2.—The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder, nor should the course of conduct of the physician, directly or indirectly, tend to diminish the trust reposed in the attending physician.

Sec. 3.—The same circumspection should be observed when, from motives of business or friendship, a physician is prompted to visit a person who is under the direction of another physician. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

Sec. 4.—A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another physician, in the same illness, except in case of a sudden emergency, or in consultation with the physician previously in attendance, or when that physician has relinquished the case or has been dismissed in due form.

Sec. 5.—The physician acting in conformity with the preceding section should not make damaging insinuations regarding the practice previously adopted, and, indeed, should justify it if consistent with truth and probity; for it often happens that patients become dissatisfied when they are not immediately relieved, and, as many diseases are naturally protracted, the seeming want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge or skill.

Sec. 6.—When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired the former should resign the care of the patient immediately on the arrival of the family physician.

Sec. 7.—It often happens, in cases of sudden illness, and of accidents and injuries, owing to the alarm and anxiety of friends, that several physicians are simultaneously summoned. Under these circumstances, courtesy should assign the patient to the first who arrives and who, if necessary, may invoke the aid of some of those present. In such a case, however, the acting physician should request that the family physician be called, and should withdraw unless requested to continue in attendance.

Sec. 8.—Whenever a physician is called to the patient of another physician during the enforced absence of that physician the case should be relinquished on the return of the latter.

Sec. 9.—A physician, while visiting a sick person in the country, may be asked to see another physician's patient because of a sudden aggravation of the disease. On such an occasion the immediate needs of the patient should be attended to and the case relinquished on the arrival of the attending physician.

Sec. 10.—When a physician who has been engaged to attend an obstetric case is absent and another is sent for, delivery being accomplished during the vicarious attendance, the acting physician is entitled to the professional fee, but must resign the patient on the arrival of the physician first engaged.

ARTICLE V.—DIFFERENCES BETWEEN PHYSICIANS.

Section 1.—Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such unfortunate cases occur and can not be immediately adjusted, they should be referred to the arbitration of a sufficient number of impartial physicians.

Sec. 2.—A peculiar reserve must be maintained by physicians toward the public in regard to some professional questions, and as there exist many points in medical ethics and etiquette through which the feelings of physicians may be painfully assailed in their intercourse, and which can not be understood or appreciated by general society, neither the subject-matter of their differences nor the adjudication of the arbitrators should be made public.

ARTICLE VI.—COMPENSATION.

Section 1.—By the members of no profession are eleemosynary services more liberally dispensed than by the medical, but justice requires that some limits should be placed to their performance. Poverty, mutual professional obligations, and certain of the public duties named in Sections 1 and 2, of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by the rich, or by societies for mutual benefit, for life insurance, or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege.

Sec. 2.—It can not be justly expected of physicians to furnish certificates of inability to serve on juries, or to perform militia duty; to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without due compensation. But to persons in indigent circumstances such services should always be cheerfully and freely accorded.

Sec. 3.—Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

SEC. 4.—It is derogatory to professional character for physicians to pay or offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to solicit or to receive such commissions.

CHAPTER III.—THE DUTIES OF THE PROFESSION TO THE PUBLIC.

SECTION 1.—As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its laws, institutions and burdens; especially should they be ready to co-operate with the proper authorities in the administration and the observance of sanitary laws and regulations, and they should also be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession, as on questions of sanitary police, public hygiene and legal medicine.

SEC. 2.—It is the province of physicians to enlighten the public in regard to quarantine regulations; to the location, arrangement, and dietaries of hospitals, asylums, schools, prisons and similar institutions; in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering people, even at the risk of their own lives.

SEC. 3.—Physicians, when called on by legally constituted authorities, should always be ready to enlighten inquests and courts of justice on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poison or other violent means, and various other subjects embraced in the science of medical jurisprudence. It is but just, however, for them to expect due compensation for their services.

SEC. 4.—It is the duty of physicians, who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects, and to make known the injuries sustained by the unwary from the devices and pretensions of artful impostors.

SEC. 5.—It is the duty of physicians to recognize and by legitimate patronage to promote the profession of pharmacy, on the skill and proficiency of which depends the reliability of remedies, but any pharmacist who, although educated in his own profession, is not a qualified physician, and who assumes to prescribe for the sick, ought not to receive such countenance and support. Any druggist or pharmacist who dispenses deteriorated or sophisticated drugs or who substitutes one remedy for another designated in a prescription, ought thereby to forfeit the recognition and influence of physicians.

Principles of Ethics Adopted.

Dr. E. Eliot Harris, New York—In view of the fact that the report I have just read was unanimously adopted by the enlarged committee, consisting of the special committee, and one delegate from each state, I move the adoption by this house of the report as read.

Dr. Charles A. L. Reed, Ohio, in rising to second the motion, said that he wished to testify to the absolute harmony which has prevailed in this conference, and to congratulate the Association on the fact that by the adoption of this report we put an end to a controversial question which has disturbed our councils for many years. (Applause.)

The President put the motion, and it was adopted unanimously, amid tumultuous and prolonged applause.

Dr. E. Eliot Harris, New York, then offered the following resolution, and moved its adoption:

Resolved, That the Special Committee [illegible] Principles of Medical Ethics of the Americ[illegible] and that it be signed by the President and Secretary of this Association.

Seconded and unanimously carried.

Report of Committee on Transportation and Place of Annual Session.

Dr. Ellis, California, reported on behalf of the Committee on Transportation and Place of Session.

Invitations were received by the committee from Milwaukee, Cincinnati, St. Louis, and Atlantic City, and it was suggested to the committee by the President that the Association meet in Washington. In regard to Cincinnati and St. Louis, the invitations did not come from the medical profession. In regard to Washington, the committee telegraphed for rates in regard to hotels, and as the replies to telegrams were not satisfactory, Washington was eliminated as a place of session. The committee recommended unanimously Atlantic City, N. J., as the place of the next session.

It was moved and seconded that the recommendation be adopted.

Dr. Sarles, Wisconsin, moved to amend the report of the committee by substituting Milwaukee for Atlantic City. Seconded.

After some discussion, which was participated in by Drs. Moyer, Dorsett, Dean and Hill, the President put the substitute, and it was declared lost.

Atlantic City Session in 1904.—The house then voted on the original motion, and it was adopted.

The Secretary read a resolution from the Section on Hygiene and Sanitary Science, which, on motion, was referred to the Business Committee.

District Branches of the Association.

Dr. Edwin Walker, Indiana, president of the Mississippi Valley Medical Association, said that at the last meeting of this association a resolution was unanimously passed, declaring that it was desirable that it should become a distinct branch of the American Medical Association. He asked, therefore, that this matter be referred to the Committee on Organization.

Dr. McCormack, Kentucky, moved that the matter be referred to the Committee on Organization, and that authority be granted that committee to consider the question of the division of this country into branch associations, in accordance with the plan laid down in the By-laws, and that the committee be instructed to report on such a plan at the next annual session of the Association. Seconded and carried.

Report on National Bureau of Medicines and Foods.

Dr. Ellis, California, presented the report of the Provisional Committee on the Establishment of a National Bureau of Medicines and Foods.

Your committee has very carefully investigated the matter submitted to it both in general plan and as to the scientific, business and legal details, and while the matter will demand of the joint committees an enormous amount of work, there is nothing in the plan that can not be accomplished if the two associations co-operate with and support their committees. The matter has reached a point where a little more time devoted to energetically prosecuting the work will see a successful accomplishment of the objects desired, whereas a postponement of all further work for a year would result in the indefinite continuance of the conditions which have existed and which have been deplored since 1881.

The bureau plan has in contemplation the idea of establishing a board of qualified experts who should represent the interests and the support of the professions of medicine and pharmacy, and through the medium of such a board secure (1) more general conformity to the standards of the pharmacopeia; (2) drugs and chemicals and foodstuffs that will be actually as labeled and can be relied on; and (3) deal in a proper professional and ethical manner with the large and ever-increasing number of proprietary mixtures and preparations that are being presented to the medical profession. This was first suggested by Dr. F. E. Stewart at the session of the American Medical Association in 1881.

This idea has been elaborated and plans have been formulated which it is thought will secure the objects desired. (The detailed plans will be submitted if so desired, but they are necessarily extensive and complex, and several hours would be required to fully consider them.) These plans have been approved by a number of representative physicians and pharmacists, and it is evident that of the professional interests and the people of this country (and especially the members of the American Medical and the American Pharmaceutical Associations) really desire relief from the present unfortunate and distressing condition of materia medica and pharmacy, and of adulterated and dishonest foodstuffs, such relief is at hand.

Primarily, this plan contemplates the voluntary association of honest manufacturers and pharmacists who will agree with the board of experts representing medicine and pharmacy on standards of identity, purity, quality and strength to which their products shall comply, and will further agree to carry out these standards and to comply with the necessary rules governing manufacture, etc.

Organization for the purposes indicated would be begun by the formation of a corporation on the membership plan—no stock issued and not for profit—under the name of the "National Bureau of Medicines and Foods," and all members of the American Medical and the American Pharmaceutical Associations would be members of this bureau. It is proposed that the board of directors governing this bureau be elected by these two associations, each having five directors, one from each association retiring annually and a successor elected for five years.

In order to indicate to the physician, the pharmacist or the purchaser such articles as comply with the standards of identity, purity, quality and strength, and may in consequence be

Addition to Hospital.—A large addition is to be made to the large post hospital at Fort Meade. Plans have been received and it is expected that the contract for the erection of the new building will soon be awarded.

State Board of Medical Examiners.—Under the new law the Governor has made the following appointments to the State Board of Medical Examiners: Regulars—Drs. Stephen Olney, Sioux Falls; John W. Freeman, Lead; John L. Foxton, Huron, and H. E. McNutt, Aberdeen. Homeopaths—Drs. Alonzo A. Cotton, Vermillion, and Hans M. Finnerud, Watertown. Eclectic—Dr. Harry S. Graves, Hurley. The board organized by the election of Dr. Stephen Olney, president; Dr. Harry S. Graves, vice-president, and Dr. H. E. McNutt, secretary and treasurer. The first examination will be held in Sioux Falls, July 8.

GENERAL.

Cholera has reappeared at Manila and in the archipelago and is increasing with the return of the hot season.

The Association of American Medical Colleges met, under the presidency of Dr. William L. Rodman, at New Orleans, May 4 and 5. The principal business was the consideration of the report of the Committee on By-laws, which advocated and recommended the raising of entrance requirements. The report was adopted with a few amendments, to go into effect July 1, 1905. The officers for next year are: President, J. R. Guthrie, Dubuque, Iowa; first vice-president, George M. Kober, Washington, D. C.; second vice-president, J. Oliver, Cincinnati; secretary-treasurer, Fred C. Zapffe, Chicago; judicial council, W. J. Means, Columbus, Ohio; J. M. Dodson, Chicago; T. J. Hawkins, Denver; H. B. Ward, Lincoln, Neb.; Randolph Winslow, Baltimore; J. D. Griffith, Kansas City, Mo., and J. W. Holland, Philadelphia.

FOREIGN.

Homage to Huchard.—The friends and pupils of Prof. H. Huchard of Paris are collecting subscriptions to present him with a bronze plaque on the occasion of his promotion to be officer in the Legion d'Honneur.

Hygienic School Hours.—In Galicia the grammar schools have a single session, from 8 till 1, and the desirability of a change has been discussed. The medical association advised in favor of the present hours, as an afternoon session interferes with digestion and assimilation, while the best mental work is done in the morning. Owing to the prevailing local social, economic and climatic conditions the association believed that two sessions would entail many more disadvantages than the present plan.

Romiti's Silver Jubilee.—Prof. G. Romiti of Pisa celebrated, March 5, the twenty-fifth year of his incumbency of the chair of anatomy at Siena and Pisa. He was presented with a souvenir volume of the "Archivio Italiano di Anatomia ed Embriologia," a gold medal and several scientists gave him special volumes of their works. The chairs of anatomy at five other Italian universities are now occupied by his pupils and two others by pupils of those who have studied with him. His manual of anatomy is the text-book in use in Italy, and he has published more than a hundred monographs on anatomy and embryology.

Campaign Against Charlatans in Germany.—One of the deputies in the Wurtemberg legislature recently urged that the government should assist physicians in their campaign against charlatans more than heretofore. He also stated that the struggle in which the physicians are now engaged against the starvation fees given by the sick benefit societies is a laudable effort to counteract the degradation and proletarianizing of the medical profession. The minister of the interior replied that the matter was one for the general government to decide, not the states for themselves, but that the imperial Reichstag would find that the Wurtemberg assembly would be glad to co-operate with the general government in the matter.

The National Asylum for Insanity of Rio de Janeiro.—Dr. Julians Moreira, professor of psychiatry and neurology in the Medical School of Bahia and co-editor of the "Gaseta Medica" of Bahia, has been appointed director of this great asylum. The institution is to be enlarged shortly by the addition of new buildings, the ground for which, adjoining the present property, has already been purchased. The erection of these new buildings will increase the capacity of the hospital to 1,000 beds instead of the present 900 beds. Funds for the erection of the buildings are available, which will be sufficient to provide for a modern equipment of the new wards. Plans for the new epileptic ward are being prepared. It will be detached from the other buildings.

The Contract Practice Troubles in Germany.—The agitation in regard to the pending legislation to increase the length of medical attendance for members of sick benefit societies, the "Muenchener Med. Wochft." declares, is by no means confined to South Germany, as quoted in our last number. It is able to cite proceedings of various medical organizations, etc, which show that the movement is nearly general. The necessity of energetic measures to compel the societies to increase the remuneration for the double task to be imposed is rousing physicians to mold public opinion through the daily papers. A number of lay papers have recently contained articles, evidently written by physicians and having a marked effect in enlightening the public. Among the best is an article by Dr. F. Haker of Munich, published in No. 90 of the "Allg. Ztg.," entitled "The Position of German Physicians and Their Struggle Against the Decline of the Profession," and mentioned as a model of captivating and dignified style. The arbitration at Mülhausen was fruitless, and the physicians have resumed their former attitude, refusing to serve further as contract physicians and not only demanding the ordinary rates for medical attendance, but refusing credit. Consequently, the officers of the societies have to be accessible to the members at any hour, day or night.

Physicians' Insurance Association at Vienna.—The Vienna "Medical Doktoren-Collegium" now has a membership of 715 physicians, with a capital of about $1,700,000. One of the features is the "widows' and orphans' society," with 404 members. It paid pensions to 187 widows and 3 groups of orphans, about $50,000 in all, last year. The "support institute" had 238 members and its fund amounted to $85,000. It supplied permanent support to 6 members and temporary to 10, expending $2,000 in this way. The "pension institute" had 238 members and a fund of $280,000. It pays out $240 annually to 36 pensioners, and paid to the heirs of deceased physicians about $1,520 during the year. There is also a "health resort fund" to enable members of the collegium to have the benefit of a course of mineral waters or trip elsewhere. There are also endowments for needy physicians, 35 representing $40 to $176 a year; 12 for widows and orphans of physicians, and 16 for the sons of physicians, representing $8.50 to $236 a year and free places in the institutes. The collegium sent out 80,000 circulars last year to physicians throughout Austria, endeavoring to secure new adherents, but only 80 responded and, as 41 died or resigned, the gain was merely 39. A letter from Vienna to the "Munich Med. Wochft." comments that this apathy in regard to such an important organization, with dues 15 per cent. less than lay insurance societies, can be attributed only to indolence on the part of the majority of the profession, or else that the majority are in such financial straits that even the modest dues required are beyond their reach—probably both causes co-operate, the writer concludes. Switzerland has two similar medical insurance societies, the combined capital about $38,000. One is 3 and the other 20 years old.

Book Notices.

The Surgery of the Head. By Bayard Holmes, B.S., M.D., Professor of Surgery in the University of Illinois. Cloth. Pp. 569. Price, $2.50. New York: D. Appleton & Co. 1903.

The mass of surgical facts regarding bacteriology and histology accumulated within the present era is awe-inspiring. Only specialists can hope to master a tithe of them; and individuals can scarcely expect to write systematic and comprehensive text-books of surgery. Indeed, attempts to include facts and principles in treatises by a single author have almost been abandoned, while composite works of great bulk, in which each chapter is assigned to an individual writer, have long been the order of the day. Of late even an encyclopedia of surgery has been in course of preparation and issue under the editorship of the distinguished Kocher. Thus facts are given the maximum prominence, while the principles, the informing and unifying pathologic spirit of surgery are likely, at least in this instance, to suffer total eclipse.

Billroth's classical "Principles of Surgery" has run through nearly twenty German editions, has been printed in many languages, and is profitable classical reading to-day. This is true because Billroth recognized the permanent and immutable as well as the temporary verities of surgery.

Holmes'. book is founded on an accurate knowledge of the modern principles of pedagogics. He realizes that the student who learns a general principle of surgical pathology or practice is, by the very acquisition, a changed man. If many principles are learned, the theory of surgery is in the grasp of the student. Holmes' book is written in a new old way and represents a return to the simpler style of a simpler surgery. Actual clinical cases are used as a starting point in treating principles, and in the choice of these cases the writer has not depended on his own experience alone but has freely quoted from current literature. The charm of Sir Astley Cooper, of Trousseau and of Billroth is in these simple pages. He who is in search of catalogued facts will consult an encyclopedia, a book of logarithms or interest tables, as need may indicate. But every seeker for the subtle relation between fact and theory which, when acquired, makes the real surgeon rather than the mere technician will read this new work. Practitioner and student may thus find equal profit in its pages. We predict that not only will this work find many readers but also many imitators, and that to the lasting profit of our genial art.

The Evolution of Man and His Mind. A History and Discussion of the Evolution and Relation of the Mind and Body of Man and Animals. By S. V. Clevenger, M.D., Author of Medical Jurisprudence of Insanity. Cloth. Pp. 615. Price, $5.00. Chicago: Evolution Publishing Co. 1903.

This is a comprehensive work, covering the history, ethnology, biology and sociology of humanity in a compass of a little over 600 pages. The author is evidently a man of wide reading and a naturally suggestive and ingenious thinker. Notwithstanding his generally scientific accuracy, we notice several places wherein one might think that his information has been erroneous. At least, in some instances, he appears to have accepted as facts statements that draw on the credulity of the reader and seem to us somewhat irrational. Among these statements we can include such a one as that of the osteopathic school in Missouri selecting its anatomic subjects "on the hoof" in one of the asylums and some few other like instances, indicating a lack of faith in modern popular and political administration, which we think is undeserved. There is also a strong element of the author's personality evident in many of the pages in his comments on current matters, politics and the questions that come up from time to time in the newspapers. Perhaps the best chapters are those on heredity, hunger and love, the development of the mind, the senses and feelings and the instincts and emotions. The chapter on superstition will not suit the average believer in the Christian or in any other special religion, for the author is evidently, in his beliefs, what is sometimes called "broad" and his remarks on the subject are rather heterodox. His views on sociology also have several points for criticism, though, in the main, there is much of which everyone must approve. We regret that the author did not take time to get up an index, for a book of this character without an index is very unsatisfactory. It is not a book that one will pick up and read through as one would read a novel—at least the average individual will not do this—but there are subjects covered that one would be glad to look up in an index without having to wade through several chapters to find what is wanted.

The Mycology of the Mouth. A Text-Book of Oral Bacteria. By Kenneth Weldon Goadby, D.P.H. Camb., L.R.C.P., M.R.C.S., L.D.S. Eng., Bacteriologist and Lecturer on Bacteriology, National Dental Hospital. With Illustrations. Cloth. Pp. 241. Price. $3.00 net. London, New York, Bombay: Longmans, Green & Co. 1903.

The reason for use of the term "mycology," says the author, is that the micro-organisms of the mouth include species belonging to the higher orders than the bacteria or schzomycetes. The duplication of terms seems wholly unjustifiable since bacteria are bacteria wherever they may be found. While this work of some 240 pages is not strictly original, the author has brought together all that is known up to the present time on the bacteria of the mouth. The work is conveniently divided into thirteen chapters with an appendix. Much of the early work of Miller and Leon Williams is recognized, while the author has added considerable from his own research.

The micro-photographic illustrations are excellently done. While many believe in schematic illustrations for the student, experience has proven that micro-photographs give a better idea of what is found when the student is searching for a given object. There is no reference to many American authors, although considerable work has been done along this line in this country.

Muco-Membranous Entero-Colitis. Symptoms, Complications, Etiology and Treatment. By Maurice De Langenhagen, M.D., Consulting Physician at Polombieres, Vosges, France. Cloth. Pp. 115. Price, $1.25. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

This little work is written by a local specialist who has taken up a comparatively limited subject, but one which, because of its frequency and associations, is certainly worthy of a monograph. Muco-membranous colitis is one of the commonest accompaniments or, perhaps, causes of neurasthenic conditions, and a better knowledge of its symptoms and management is certainly desirable. The author points out its frequency in Europe, and we believe it is hardly likely to be found less frequent in this country, though, unfortunately, it has not received the attention that it deserves. While not a fatal disorder, it is sometimes an exceedingly obstinate and refractory one and anything that will enlighten us as to its treatment is of advantage. The volume is likely to be of service, therefore, to the general practitioner.

A Text-Book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M.A., M.D. Aberd., Professor of Materia Medica and Therapeutics in the University of Michigan. Third Edition, Revised and Enlarged. Illustrated with 52 Engravings. Cloth. Pp. 756. Price, $3.75. Philadelphia and New York: Lea Brothers & Co.

The appearance of the third edition of Cushny's pharmacology and therapeutics, only eighteen months after the preceding one, shows the favor with which the book has been received. The present edition contains certain additions, such as fuller remarks on spinal anesthesia, suprarenal extracts, etc. The author has also appended to this edition a classification of drugs according to their therapeutic uses, which he has found useful in his teaching of pharmacology.

State Boards of Registration.

Maine Report.—Dr. A. K. P. Meserve, Portland, secretary of the Maine Board of Registration of Medicine, reports the examination held at Augusta, March 24, 1903, as follows: Number of subjects examined in, 12; total questions, 80; percentage required to pass, 75 average and not less than 60 in any one branch; examination was partly oral and partly written; total number examined, 7; all of whom passed.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
497	R.	Coll. Phys. and Surg., Baltimore...	1895	88.5
501	R.	Coll. Phys. and Surgs., Baltimore...	1896	87 2-7
498	R.	Baltimore Univ. School of Med....	1902	87.3
499	R.	Dartmouth Medical College........	1901	90 1-7
500	R.	Harvard University	1901	84.6
502	R.	Harvard University	1902	92 1-7
503	R.	Univ. of Pennsylvania Med. School.	1902	90 3-7

District of Columbia Report.—Dr. Wm. C. Woodward, secretary of the Board of Medical Supervisors of the District of Columbia, reports the examination held at Washington, April 9, 1903, as follows: Subjects, 17; 80 written questions; percentage required, 75; examination was partly oral and partly written; total examined, 14; passed, 9; failed, 5.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
362	R.	University of Virginia............	1901	84.46
363	R.	University of Virginia............	1897	81.87
364	R.	University of Pennsylvania........	1888	88.81
365	R.	Georgetown University	1902	84.43
371	H.	Hahnemann Med. Coll., Phila......	1902	87.98
374	H.	Hahnemann Med. Coll., Phila......	1902	89.12
372	R.	Howard University	1902	78.75
373	R.	Coll. of Phys. and Surgs., N. Y. City	1899	84.78
354	R.	Columbian University	1900	87.87

FAILED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
366	R.	National University	1902	*74.50
369	R.	National University	1901	†71.46
367	R.	Baltimore Medical College........	1898	55.43
368	R.	Howard University	1902	74.09
370	R.	Women's Med. Coll. of Pennsylvania	1867	56.21

* Second examination.
† Fourth examination.

Medical Organization.

Outagamie County (Wis.) Medical Society.

The physicians of Outagamie County have organized a medical society to be affiliated with the Wisconsin State Medical Society and the American Medical Association.

Seward County (Neb.) Medical Society.

The physicians of Seward County met at Seward, April 24, and organized a county society, with the following officers: Dr. Charles W. Doty, Beaver Crossing, president; Dr. Jefferson T. Potter, Seward, vice-president, and Dr. Charles O. Petty, Beaver Crossing, secretary.

McDowell Medical Society.

Physicians of Franklin, Gasconade, Osage and Maries counties, Mo., met at Owensville, April 4, and organized a district medical society, with the following officers: Dr. John D. Seba, Bland, president; Dr. James E. Jose, Koenig, vice-president; Dr. A. C. Wood, Owensville, secretary, and Dr. Julius W. Nieweg, Owensville, treasurer.

Tompkins County (N. Y.) Medical Association.

The members of the Third District Branch residing in Tompkins County met, April 14, and organized this association. The following officers were elected: President, Dr. John S. Kirkendall, Ithaca; vice-president, Dr. William C. Douglass, Ithaca; secretary and treasurer, Dr. Marcus A. Dumond, Ithaca. Dr. Chauncey P. Biggs was elected fellow and Dr. E. R. Osterhout, alternate.

Otero County (Colo.) Medical Society.

This society met in January and reorganized under the new constitution and by-laws as recommended by the American Medical Association. The following officers were elected for the ensuing year: Dr. B. F. Haskins, La Junta, president; Dr. E. W. Kearby, Rocky Ford, vice-president; Dr. Arthur R. Timerman, La Junta, secretary; Dr. James F. Kearns, La Junta, treasurer, and Dr. Frank Finney, La Junta, member of the house of delegates.

Societies.

COMING MEETINGS.

Association of Military Surgeons of the United States, Boston, May 19-21.
New Hampshire Medical Society, Concord, May 21-22.
North Dakota State Medical Society, Bismarck, May 21-22.
South Dakota State Medical Society, Mitchell, May 27-28.
Connecticut Medical Society, Hartford, May 27-28.
West Virginia State Medical Association, Charleston, May 26-28.
Indian Territory Medical Association, South McAlester, June 2-3.
Medical Society of the State of North Carolina, Hot Springs, June 2.
Ohio State Medical Society, Dayton, June 3-5.
Rhode Island Medical Society, Providence, June 4.
Wisconsin State Medical Society, Milwaukee, June 3-5.
Maine Medical Association, Portland, June 3-5.
Indiana State Medical Society, Richmond, June 4-5.
Medical Society of Delaware, Dover, June 9.
Massachusetts Medical Society, Boston, June 9-10.
Michigan State Medical Society, Detroit, June 11-12.
Minnesota State Medical Society, St. Paul, June 17.
Medical Association of Montana, Helena, June 17-18.
Medical Society of New Jersey, Asbury Park, June 23-25.

Medical Society of Nova Scotia.—The thirty-fifth annual meeting will be held in Antigonish, July 1 and 2.

Maritime Medical Association.—The thirteenth annual meeting will be held in St. John, N. B., July 22 and 23.

American Electro-Therapeutic Association.—The thirteenth annual meeting will be held at Atlantic City, N. J., September 22, 23 and 24, under the presidency of Dr. Daniel R. Brower, Chicago.

Buffalo Academy of Medicine.—The nomination of officers resulted as follows: President, Dr. Joseph W. Grosvenor; secretary, Dr. Edwin A. Bowerman; treasurer, Dr. Charles S. Jewett, and trustee, Dr. Ludwig Schroeter.

Eastern Dakota Medical Association.—The annual meeting was held at Brookings, S. D., April 14. Dr. Albert J. Cox, Tyler, Minn., was elected president; Dr. Edwin Klaveness, Brookings, vice-president, and Dr. Joseph G. Parsons, Brookings, secretary and treasurer.

La Salle County (Ill.) Medical Society.—The fiftieth annual meeting was held in Ottawa, April 21. Dr. William S. Sterrett, Marseilles, was elected president; Dr. Fred A. Guthrie, La Salle, vice-president; and Dr. William A. Pike, Ottawa, secretary. Next year's meeting will be held in Streator.

Seneca County (N. Y.) Medical Association.—At the annual meeting held in Seneca Falls, April 16, the following officers were elected: President, Dr. William A. Macy, Willard; vice-president, Dr. George A. Bellows, Waterloo; secretary, Dr. J. Spencer Purdy, Seneca Falls, and treasurer, Dr. Carroll B. Bacon, Waterloo.

De Witt County (Ill.) Medical Society.—At the annual meeting Dr. Joseph C. Myers, Clinton, was elected president; Dr. Samuel L. Thorpe, Kenney, vice-president; Dr. John H. Tyler, Clinton, secretary and treasurer; Dr. Albert E. Campbell, Clinton, delegate to the Illinois State Medical Society, and Dr. Guy G. Dowdall, Clinton, alternate.

Hunterdon County (N. J.) Medical Society.—The annual meeting was held at Flemington, April 28. Dr. William H. Schenck, Flemington, was elected president; Dr. Leon T. Salmon, Lambertville, first vice-president; Dr. Peter C. Young, Ringoes, second vice-president; Dr. Obadiah H. Sprowl, Flemington, secretary; Dr. Isaac S. Cramer, Flemington, treasurer.

District Medical Society of Central Illinois.—At the twenty-ninth annual meeting held in Pana, April 21, the following officers were elected: President, Dr. John H. Miller, Pana; vice-presidents, Drs. Thomas E. Cherry, Cowden, and William J. Eddy, Shelbyville; treasurer, Dr. John N. Nelms, Taylorville, and secretary, Dr. Frederick J. Eberspacher, Pana. The next meeting will also be held in Pana.

American Laryngological, Rhinological and Otological Society.—The ninth annual meeting was held at Lexington, Ky., April 23, 24 and 25, under the presidency of Dr. Joseph A. Stucky. The following officers were elected: President, Dr. Norval H. Pierce, Chicago; vice-presidents, Drs. George L. Richards, Fall River, Mass., Chevalier Jackson, Pittsburg, Redmond W. Payne, San Francisco, and John F. Woodward, Norfolk, Va.; secretary, Dr. Wendell C. Phillips, New York, and treasurer, Dr. Ewing W. Day, Pittsburg.

Alumnae Association, Woman's Medical College.—The alumnæ met for the twenty-third annual meeting at Chicago, April 29, about 60 being in attendance. The following officers were elected: President, Dr. Sarah Hackett Stevenson, Chicago; vice-presidents, Drs. Mary E. Bates, Denver, and Anna Ross Lapham, Chicago; secretary, Dr. Eliza H. Root, Chicago; treasurer, Dr. Mary C. Hollister, Chicago, and executive committee, Drs. Anna E. Blount, Oak Park, Ill., Rose Millard, Chicago, and Minnie K. Bowles, Joliet, Ill.

Association of Railway Surgeons of the Pacific Slope.—At the annual meeting held recently in Santa Barbara, Cal., resolutions were passed expressing regret at the death of Dr. Matthew Gardner. The following officers were elected, after which the association adjourned out of respect to the memory of Dr. Gardner: Dr. Walter B. Coffey, San Francisco, president; Drs. Norman H. Morrison, Los Angeles, Charles N. Ellinwood, San Francisco, and Kenneth A. J. Mackenzie, Portland, Ore., vice-presidents; Dr. James P. Dunn, Oakland, secretary, and Dr. Frank K. Ainsworth, Los Angeles, treasurer.

Massachusetts Association of Boards of Health.—At the meeting in Boston, April 30, Mrs. Ellen M. Richards spoke on "Educational Sanitary Inspection," and Mrs. von Wagner told of the way in which the poor of Yonkers, N. Y., are taught to abate nuisances and live decently. Dr. Frank L. Morse of the State Board of Health spoke on "The Recent Smallpox Epidemic in Massachusetts, giving a powerful statistical and practical plea for universal and repeated vaccination. Last year the disease was more prevalent than at any time since the epidemic of 1872. During the year there were 2,300 cases, with 278 deaths in the state. Out of this number of deaths 200 were of persons who had not been vaccinated. The association took action favoring the state production of antitoxin and vaccine.

LOUISIANA STATE MEDICAL SOCIETY.

Twenty-fourth Annual Meeting, held in New Orleans, April 28 to 30, 1903.

The President, Dr. Isadore Dyer, in the Chair.

Opening Sessions.

The morning session was largely devoted to organization. The address of welcome was delivered by Hon. Arthur McGuirk. The report of the Committee on Arrangements was presented by Dr. Louis G. LeBeuf.

The president, Dr. Isadore Dyer, New Orleans, in his preliminary remarks, noted the fact of the paucity of local societies and that the profession in Louisiana is just awakening to the fact that it is only by a spirit of fraternity among the units that broader community interests can be created. He commended and advised the adoption of the constitution as suggested by the American Medical Association for state societies, and believed that it must ultimately obtain in every state where cohesion of medical men is desired.

Salt as a Stimulant.

Dr. S. L. Williams, Oak Ridge, read a paper in which he considered the use of normal salt solutions in the treatment of septic and toxic conditions. His experience for the past three years has demonstrated the efficiency of salt solution and butter administered subcutaneously and percutaneously in enteric fever and scarlet fever. In case of habitual alcoholics the treatment was not efficient.

Malarial Hemoglobinuria.

Dr. Ladis Lazaro, Washington, presented a paper on this subject, which brought out active discussion, bearing chiefly on the use or non-use of quinin in malarial diseases; the advocates and opponents of quinin fighting, without coming to any conclusion, the battle which has been fought for years and always without decisive results.

Anesthesia.

Dr. T. Edgar Schumpert, Shreveport, read a report on chloroform anesthesia at the morning session of the second day, detailing methods to be followed in the administration of the anesthetic by which danger can be avoided and exhibiting an appliance to be employed in its administration. In the discussion the necessity of a preliminary examination of the patient was emphasized and the use of adrenalin to overcome the effect of chloroform in extreme cases was mentioned.

Secretary's Report.

Dr. William M. Perkins, New Orleans, recording secretary, reported that the active membership of the society was 420.

New Constitution.

The discussion of the constitution was taken up, and Dr. Charles Chassaignac, chairman of the Committee on Revision, presented a draft of the constitution proposed by the American Medical Association. After considerable discussion, this was adopted with minor amendments.

President's Address.

At the evening session Dr. Isadore Dyer delivered the annual presidential address, his subject being "The Art of Medicine." After discussing medicine from the days when fetishes, charms, incantations, etc., were in vogue, he went on to say that medicine is still combating the weaknesses that hamper its progress, with the purpose, in the future, of conquering the great enemy, death. In conclusion he said:

> The profession of medicine has sat at the footstool of science, now and then gathering some of the leaves which have fallen from the hands of the alma mater of all knowledge. Again, some more emboldened spirit has snatched a full garland and has carried it off to render a proper return in advanced knowledge.
>
> One great man after another has died with the regret of neglected achievement, not fearful of death, but sad at leaving so much undone. A host of men have blazed the way for the art medical; many have dropped into the pool of forgetfulness the emblems of their trade and have lifted heavy burdens for the art itself; some have hewn long with small reward, while others have marked grand highways through the wilderness of ignorance and bigotry.
>
> It is not only the songs of the birds in the forest, nor the rustling leaves, nor the smell of freshness which makes the springtime, but without these things there could be no springtime. And so there must be in the art of medicine, of such kind as you will, but not barren, rather a fruitful one, carrying with it the sentiments of community of interests, of achievements, of earnestness, of fraternity, so that in the days to come we may think of the Temple of Hygeia and of the Great Healer as forever free of those sorts of death which are only evil shadows after all.

Yellow Fever.

Dr. Edmond Souchon, New Orleans, in his paper entitled "Facts Relating to the Transmission of Yellow Fever," detailed experiments with mosquitoes captured on fruit vessels coming from Central America, from which he drew the deduction that mosquitoes are not the only means of communicating the disease. This paper will appear in full in The Journal.

In the discussion Dr. J. M. Lindsley of Havana stated that he believed the mosquito was the primary means of transmitting yellow fever, and thought if the board of health at Havana had acted on this theory a few years ago many lives might have been saved.

Dr. Oliver L. Pothier supported Dr. Lindsley's views, and Dr. Souchon closed the discussion by declaring that, while he desired to be liberal, the ones who suffer must be considered when the question of exposure is brought up, and that leniency towards Cuba would be further extended when the health authorities were satisfied that the danger of transmission from yellow fever from that country had ceased to exist.

Quarantine.

Dr. Arthur Nolte, New Orleans, gave the history of the efforts to quarantine against yellow fever at New Orleans during many years and of the great results accomplished during the epidemics there. He detailed the present methods of disinfecting vessels.

Dr. Lindsley made a second appeal for impartiality in the enforcement of quarantine regulations between Cuba and other tropical countries.

Dr. Quitman Kohnke presented a very comprehensive history of Louisiana quarantine against yellow fever from the time of earliest legislation up to the present day.

Illegal Practitioners.

Dr. Charles L. Chassaignac, New Orleans, called attention to the reference in the report of the State Board of Medical Examiners to the prosecution of illegal practitioners in the state during the last year and urged that more rigor be used in guarding the profession.

Dr. A. Feltus Barrow, St. Francisville, president of the State Board of Medical Examiners, declared that he was not satisfied with the enforcement of the law and hoped that some decided action would be taken. He said that many students from Tulane University, on receiving their diplomas, fall into the hands of fakers of the profession who use them and their names to further their illegal practice.

Dr. Chassaignac stated that the difficulties attendant on prosecutions had been due to the lack of evidence and the lack of organization, and urged organization in the profession in order to accomplish the ends in view.

Pasteur Institute.

Dr. Charles L. Chassaignac introduced resolutions which were adopted without discussion, pledging the support of the members of the society to the establishment of a Pasteur Institute in New Orleans, and declaring in favor of the institute being made a part of the Tulane University, urging all physicians in the state to secure state and city and private donations; requesting the co-operation of the Orleans Parish Medical Society, and directing the president of the state society to appoint a member in each parish to supervise the movement therein.

Election of Officers.

The report of the Nominating Committee was adopted, whereby the following officers were elected: President, Dr. John M. Barrier, Delhi; vice-presidents, Drs. J. F. Buquoi, Pointe-a-la-Hache; John Callan, New Orleans; Frederick R. Tolson, Lafayette; Norwood K. Vance, Shreveport; S. L. Williams, Oak Ridge; Charles M. Sitman, Greensburg, and Arthur Gardner, Bristol; recording secretary, Dr. William Perkins, New Orleans; corresponding secretary, Dr. Andrew G. Freiderichs; treasurer, Dr. Henry S. Cocram, New Orleans;

delegate to the American Medical Association, Dr. Rudolph Matas, New Orleans; alternate, Dr. Louis G. LeBeuf, New Orleans, and additional delegate, Dr. Whyte Glendower Owen, White Castle.

1904 Meeting.

Lafayette was selected as the place of meeting for 1904, and the date May 3 to 5.

Banquet.

The local members tendered a banquet to the society at the West End Hotel, which was attended by over 200 guests. Dr. Quitman Kohnke was the toastmaster, and toasts were responded to by Drs. H. W. Foote, Ernest Lewis, Joseph Hart, Derold Wilders and Owen.

NEW YORK ACADEMY OF MEDICINE.

Regular Meeting of the Section on Pediatrics, April 9, 1903.

Henry Heiman, M.D., in the Chair.

Result of Operation for Intussusception.

Dr. **John F. Erdmann** reported three successful cases of operation for intussusception. The first was an infant of about four and a half months, first seen twenty-three hours after the onset of symptoms. Bloody mucus was passed per rectum, but no tumor could be felt. The operation revealed a double intussusception—an intussusception of the ileum within itself and an intussusception of the ileum within the colon. The appendix was not involved, but was removed after reduction of the intussusception.

The second patient was an infant of six months, in whom no tumor could be felt, but one was visible on the left side of the abdomen. There were continuous abdominal pain and bloody discharges. In this case also there was a double intussusception, and here the appendix was included.

The third patient was 5½ years old. There was no history pointing to intussusception and no fever, but there was continuous pain in the abdomen, with resistance in the right side of the abdomen. An ileocolic intussusception was found and was reduced.

DISCUSSION.

Dr. **H. Lilienthal** said that, while recovery occasionally followed the employment of hydrostatic pressure, this method was decidedly dangerous—indeed, no case of intussusception of sufficient severity to give rise to symptoms should be treated by other than surgical means.

Inversion in the Treatment of Acute Pulmonary Edema in Young Children.

Dr. **Thomas S. Southworth** reported the case of an infant, suffering from very severe and acute edema of the lung, wherein inversion and stroking pressure on the back gave prompt and marked relief by causing the discharge of much frothy mucus. The child had no cardiac disease, and the attack was supposed to have been induced by acute indigestion.

Pin Worms in the Appendix.

Dr. **J. F. Erdmann** exhibited an appendix containing numerous pin worms. The child had suddenly become acutely ill, and this was what was encountered at the operation.

DISCUSSION.

Dr. **Henry Heiman** said that the case was interesting because it was generally believed that the pin worms were only found in the rectum or descending colon.

The Surgical Features of Perforation of the Intestine in Typhoid Fever in Children.

Dr. **Charles A. Elsberg** presented a paper on this subject, in which he gave the results in the 289 operative cases on record. There were altogether 75 recoveries, or 25.9 per cent., and of the 25 patients who were under 15 years of age 16, or 64 per cent., recovered. Dr. Elsberg reported a recent case on which he had operated, which was, by the way, the youngest operative case on record, the patient being 6½ years old. About two weeks after the operation a vaginal discharge made its appearance, and in this was found a pure culture of typhoid bacilli. The frequency of intestinal perforation in children suffering from typhoid varied greatly in different series. Thus, Dr. J. Lovett Morse saw 284 cases of typhoid in children without once meeting with this complication, whereas Dr. Fitz met with it seven times in 192 cases. Holt collected 1,028 cases in children, and found that intestinal perforation occurred in 12, or 1.1 per cent. In practice it was well-nigh impossible to differentiate this complication from peritonitis.

The author's cases of operation were 25 in number, of which 14 were between 9 and 12 years of age. Eighteen of the patients were males, a fact difficult of explanation. It was noted that the facial expression changed in 11 cases, but that it never occurred early, and ordinarily not until other signs and symptoms had made the diagnosis of intestinal perforation reasonably certain. The pulse, respiration and temperature afforded little or no assistance in diagnosis, and although leucocytosis occurred at the time of the perforation, it was exceedingly evanescent, probably because of the great outpouring of the leucocytosis into the peritoneum when this membrane became infected. The first symptom in 20 cases was pain in the lower part of the abdomen, usually paroxysmal, and associated with or speedily followed by abdominal tenderness. Rigidity of the abdominal muscles was noted in 14 cases. The perforation most often occurred in the third week of the disease or in relapses.

The effect of delay in operating on the result was shown by the following figures regarding the interval elapsing between the occurrence of the perforation and the operation: Two cases operated on in the first four hours gave 100 per. cent. of recoveries; 3 cases operated on within the second four hours yielded 66.7 per cent. of recoveries; 7 cases were operated on within the third four hours with 71.4 per cent. of recoveries; in 3 cases the operation was done within the fourth four hours with 100 per cent. of recoveries; 1 case was operated on within the fifth four hours, and 1 in the sixth four hours without a recovery. Seven cases were not operated on until after the end of the first twenty-four hours, and here there were 57 per cent. of recoveries. In one of the fatal cases the interval was not known. The operation appeared from the statistics to be twice as successful in children as in adults, the most important element in the prognosis being rapidity of operating.

DISCUSSION.

Dr. **Lilienthal** said that he could vouch for the correctness of the diagnosis in the case reported in the paper in which a child had recovered from a typhoid perforation of the bowel without operation. The mortality rate given was probably too low, for it was more than probable that many of the unsuccessful cases had not been reported.

Dr. **Erdmann** suggested that the typhoid bacilli might have gained access to the vagina in the case reported as a result of the bursting of an abscess, or possibly by migration through the tubes and uterus

Dr. **M. Manges** pointed out that in children the occurrence of shock was apt to be overlooked because of the occurrence of fever, but it would be denoted by the presence of perspiration.

Dr **Heiman** said that a secondary anemia developing in the third week of typhoid might so depress the nervous system as to simulate intestinal perforation, and the same was true of the breaking down of a mesenteric gland. It was highly improbable that the typhoid bacilli could migrate through the tubes and uterus of a child of 6 years because of their rudimentary condition at that age.

Dr. **Elsberg**, in closing the discussion, remarked that, as all of the cases he had reported occurred in one year, it was quite possible that another year, with a different type of typhoid, might yield very different results.

Treatment of the Paroxysms of Whooping Cough by Pulling the Lower Jaw Downward and Forward.

Dr. **Jacob Sobel** said that this method had been first suggested years ago by a Swiss physician, O. Naegela, but had apparently been overlooked by most pediatrists. Dr. Sobel had tested the method in dispensary practice in 96 cases. In only 9 cases was there absolutely no effect on the paroxysm at the time of the child's visit to the dispensary. Very young children, not knowing the meaning of what was being done, were apt to become frightened, and by their crying neutralize the good effect of the manipulation. The physician, standing behind the child, should place both thumbs against the angles of the jaw, the index fingers on the zygomatic arch and the remaining fingers on the chin, and should then push the lower jaw downward and forward. The method had been devised in the belief that the essential element to combat was the spasm of the glottis. The spasm was so promptly controlled that it was not unusual for the whoop to be suppressed. In this way the mother or nurse could be taught to prevent the occurrence of many paroxysms, thus sparing the little one much nerve-racking distress, and, because of the control of vomiting, materially improving the general nutrition. The only contraindication was the presence of food in the mouth or esophagus. Dr. Sobel had not found the manipulation so useful in controlling other spasmodic coughs.

Dr. Charles Herrman said that he had tried this manipulation in a number of cases, and in most instances with a satisfactory result. Unfortunately, for the reason already mentioned, it was not very applicable to very young children. The method probably failed to relieve the spasm of the glottis occurring in tetany because, unlike pertussis, there was, in addition to the spasm of the glottis, a general spasm of the diaphragm and other respiratory muscles.

BOSTON MEDICAL LIBRARY ASSOCIATION.

Regular Meeting, held May 4, 1903.

Dr. W. T. Councilman in the Chair.

The Pathology and Etiology of Smallpox.

The meeting was devoted to a fuller statement of three of the phases of the subject, studied in connection with the purpose of finding the cause of variola.

THE BACTERIOLYTIC COMPLEMENT CONTENT OF THE BLOOD SERUM IN VARIOLA.

Dr. Ralph L. Thompson explained the terms "complement content" and "amboceptor," and stated Ehrlich's hypothesis, which is an explanation of individual immunity or susceptibility to infection.

The two great difficulties in the study are the method and the lack of any accurate knowledge of the nature or composition of the "complement" itself. His chief contribution is the discovery that another serum, for instance that of a horse, may be used as the amboceptor. This does away with the necessity of abstracting a large amount of blood from the individual, a few drops from the ear being quite sufficient, just as in the Widal tests. He has, hence, been able to study a large number of people, some being very severe cases of variola.

In all cases there is early a low "complement." Abortive cases and cases of true smallpox with all the stages but without complications have an early and rapid return to normal, beginning with the first involution of the lesions. Cases complicated with a secondary infective humor have always a low "complement," which may persist after the lesions have healed and the patient is well.

Much study is yet needed, but it would seem that this opens up a vast field for research, and is possibly a most important contribution to our means of making a more accurate prognosis.

EXPERIMENTAL STUDIES IN VACCINIA.

Dr. E. E. Tyzzer's experimental studies have been conducted on the lesions of vaccinia in the cornea of rabbits and calves. Vaccine virus introduced into the cornea of a rabbit produced a great proliferation of surrounding tissue, only a slight degeneration and a very evident formation of "vaccine bodies" which grew in size and number and invaded adjoining tissue. These disappeared in from six to eleven days. The same results were observed when variola virus from an early vesicle was inoculated into the cornea of the rabbit or from the cornea of an infected rabbit to another not yet infected.

He considered this strong evidence that there is the same cause for both variola and vaccinia. When the virus of either, however, is introduced into the cornea of a calf, much degeneration and no proliferation is produced, but the same "vaccine bodies" appear.

He then demonstrated the life cycle of these bodies by diagrams and lantern slides of photomicrographs. He believes this is the asexual cycle of a sporozoon. He stated the various other explanations offered for these vaccine bodies and that he had carefully considered each of them, with the result that he is confident that he has here a living growing body.

THE SKIN LESIONS IN VARIOLA.

Dr. W. T. Councilman explained the very definite nature of the course of variola and the care with which he and his associates have searched for the "protopustule" by which Pfeiffer endeavors to explain this definite course. No trace of any such pustule could be found. Nothing at all is known of the changes during the first twelve days, the period of incubation. Then we begin to get degeneration of the epithelial cells and the forcing out of fluid exudate. He showed a long series of lantern slides of photomicrographs of the skin in and near the lesions of variola from the first appearance of the papule to the condition of the scab.

He then demonstrated, as he did before the Boston Society of Medical Sciences, the peculiar bodies present in the cells of the deeper layers. He laid emphasis on the fact that during the intracellular cycle the cells were little if at all altered and the nuclei were normal. During the intranuclear cycle, however, degeneration of both is rapid. The same organisms are found in the beginning of both vaccinia and variola. Variola given to a cow will yield only the vaccinia cycle. But in man we get the second cycle, which is more complex and seems to correspond to the sexual cycle such as takes place for the malaria germ, within the mosquito as host. In the monkey, too, both cycles are obtained.

There is yet much to be done to work out completely this sexual cycle. Many of these observations were only made clear by the study of the photomicrographs of stained specimens. It has a complicated history and a complicated structure.

The organism has not been cultivated outside of the body, nor has it been observed before the appearance of the papule. Once the spores have been found in a blood vessel, suggesting thus the method of the dissemination of the disease.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Treatment of Acute Gout.

J. R. Clemens, in "Med. News," states that in the treatment of acute gout general consideration must be given to the medicinal, dietetic and local treatment. Elimination must be kept up by means of mercurials, salines and diuretics. Unless there are indications to the contrary, the treatment should be begun by the administration of pilula hydrargyri gr. iv (.25) followed several hours later by two ounces (60.) of mistura sennæ comp. in order to relieve hepatic congestion. The following mixture should then be prescribed, and continued until the motions become very free:

℞.	Magnesii sulph.	ʒiss	6	
	Magnesii carb.	gr. xxx	2	
	Pot. citratis	gr. xxx	2	
	Tinct. colchici sem.	m. x		65
	Aq. menth. pip. q. s. ad	℥i	30	

M. Sig.: To be taken at one dose and repeated every four hours until the movements are free, then less often. The colchicum should be continued until all the pain in the joint has disappeared, care being observed not to produce nausea, vomiting, etc.

The patient should be told to drink freely of hot water. The local treatment of the joint, according to the author, is most important. Warmth to the joint is very essential. As a local application the following is recommended:

℞. Sodii carb.	ʒiii	12
Tinct. opii	℥ii	60
Linimenti belladon.	℥ii	60
Aquæ q. s. ad	℥viii	240

M. Ft. lotio. Sig.: Mix part of the lotion with an equal quantity of hot water and apply to the joint on linen well saturated as hot as can be borne by the patient.

Around the dressing a yard of thin rubber should be placed, and over this a thick dressing of cotton wool held in place by a roller bandage. The limb should then be elevated, resting on pillows. Cold should never be applied to the joint. The diet for the first day or two should consist of milk, as follows: Bread and milk; tea boiled with milk instead of water; milk puddings of tapioca, sago, rice; milk and arrowroot. After convalescence the diet may be made more liberal. The following articles should be avoided: Salt meats and salt fish; shell fish (except oysters); all rich pastries and sweets; soups of all kinds; pickled foods; the four vegetables, tomatoes, asparagus, rhubarb, green peas. Beers and wines should be avoided, as well as salt and sugar, except in small quantities. Massage should be given to the joint. The following mixture is of service as a tonic and prophylactic, and should be continued for two or three months:

℞. Potass. iodidi	gr. x	65
Spts. ammon. arom.	m. xv	1
Inf. gentianæ co. q. s. ad	℥i	30

M. Sig.: At one dose after a meal and repeated thrice daily.

F. L. Satterlee recommends the following in the treatment of gout and rheumatism:

℞. Lithii benzoatis	ʒss	2
Sodii brom.		
Potassii carb., āā	ʒii	8
Potassii acetatis	℥iss	45
Sodii phos.	℥ss	15
Syr. zingiberis		
Aq. menth. pip., āā	℥vi	180

M. Sig.: One teaspoonful to a tablespoonful in half a glass of water every four or six hours after eating.

"Merck's Archives" recommends the following in the treatment of acute gout:

℞. Sodii salicylatis	ʒiv	15
Sodii nitratis	ʒiiss	10
Vini colchici rad.	ʒiiss	10
Aq. destil.	℥ii	60
Syrupi simplicis	℥iii	90

M. Sig.: One tablespoonful every four hours; or:

℞. Ichthyol	ʒi	4
Ext. belladonnæ	gr. x	65
Collodii	℥i	30

M. Sig.: To be applied externally with a brush, three times daily. And in chronic rheumatism the same periodical recommends the following:

℞. Sodii iodidi	ʒii	8
Vini colchici rad.	ʒiv	15
Sodii salicylatis	ʒiii	12
Tinct. guaiaci	℥ii	60
Syr. sarsap. co. q. s. ad	℥vi	180

M. Sig.: One dessertspoonful three times a day; or:

℞. Acidi salicylici	ʒii	8
Ichthyol	ʒiv	15
Ung. belladonnæ	ʒiv	15
Lanolini	ʒiv	15

M. Sig.: To be applied locally three times a day and thoroughly rubbed in; or:

℞. Aq. ammon. (concentrated)	ʒiv	15
Olei cajuputi	ʒi	4
Tinct. belladonnæ	℥i	30
Linimenti camphoræ q. s. ad	℥viii	240

M. Sig.: To be rubbed in thrice daily.

Salicylic Acid in Milk.

P. Schmidt, according to an abstract in "Indian Med. Record," states that the addition of a small quantity of salicylic acid to milk causes the milk to be tolerated by patients who otherwise are nauseated by its taste. From three to seven grains (.20-.50) of the salicylic acid are placed in a small quantity of milk and well stirred, this in turn is put in the quantity to be used in the twenty-four hours. The entire amount is raised to the boiling point; treated in this way the milk does not coagulate as coagulation will take place only when the proportion of salicylic acid exceeds gr. 4 (.25) to the quart. This is used in feeding infants, reducing the amount of the acid to one and a half grains to the quart.

Pertussis.

The following, according to the "Amer. Jour. of Obs." is of service in the treatment of pertussis:

℞. Tinct. stramonii sem.		
Am. bromidi, āā	ʒii	8
Elix. simplicis q. s. ad	℥ii	60

M. Sig.: One teaspoonful to a child of five years in water every two or three hours as may be necessary to quiet the cough.

The after-treatment should consist in giving ammonium carbonate gr. 2½ (.15) every three or four hours as an expectorant, administered in a little whiskey and milk. The foregoing prescription should be given sufficiently often to control the cough.

Preventive Treatment of Pericarditis.

According to Carriere, in "Amer. Med.," the heart should be watched in all infectious diseases which are liable to cause pericarditis. If rheumatism is contracted, treatment should be carried out energetically. The following combination is recommended, to be continued for three or four days:

℞. Sodii salicylatis	gr. xv-xlv	1-3
Syrupi aurantii	℥i	30
Aquæ	℥iii	90

M. Sig.: To be given during the twenty-four hours.

[The foregoing dose of sodium salicylate is frequently repeated as often as every two or three hours. The dose given would be too small for an adult.]

In other infections, in children, the following containing quinin is recommended:

℞. Quininæ hydrochlor.	gr. i-ix	06-.60
Glycyrrhizin	gr. xlv	3
Syrupi	ʒiiss	10
Aquæ	℥ii	60

M. Sig.: To be taken in tablespoonful doses during the twenty-four hours.

The importance of rest is emphasized. Cold to the precordial region and blistering below the clavicle are good prophylactics against cardiac and pericardiac complications, and should be applied in such cases.

Quinin Subcutaneously.

Aufrecht, in "Ther. Monatsh.," recommends that quinin be combined with urethane in order to render it more soluble, when it is desired to introduce the quinin hypodermically. The following combination is used by him:

℞. Quininæ hydrochlor.	gr. viiss	50
Urethane	gr. iiiss	20
Aq. destil.	ʒiss	6

M. Sig.: To be used at one injection hypodermically.

He uses this method of medication in pneumonia and puerperal fever, injecting it into the sides of the abdomen. The ill effects of quinin are observed in a much milder degree than when administered by the mouth.

Exophthalmic Goiter.

G. R. Murray, in "The Lancet," states that any drug treatment should be persisted in for several months. He recommends convallaria in those cases where the pulse remains persistently high. Belladonna does not act well in every case, but is of great value in some of these cases. He states that the bromids should be employed when marked nervousness and tremor accompanies the trouble. He also recommends arsenic in the form of Fowler's solution, giving three or four minims three or four times a day for a month or two. Thyroid extract should not be used.

Purulent Conjunctivitis.

G. C. Savage, in "Southern Pract.," states that conjunctivitis occurring within the first three days after birth should be considered as the result of infection and should be treated as such. Two drops of a two per cent. solution of silver nitrate or of a 10 per cent. solution of protargol should be put in each conjunctival sac. This should be done without waiting for pus formation and repeated on the following day. The silver solution should not be continued unless pus should appear, under which circumstances it should be used daily. The eyes should be thoroughly cleansed every half hour with a boric acid solution in order to prevent infection of the deeper layers of cornea.

Every two hours, after cleansing, the author recommends that eight or ten drops of the following solution be instilled into each eye:

℞.	Hydrastin sulph.	gr. ii	12
	Tinct. opii	m. xx-xxx	1.30-2
	Acidi boracici	gr. xv	1
	Aq. destil.	℥i	30

M. Sig.: Eight or ten drops to be instilled into each eye every two hours and continued until the eyes are well.

Cold should never be applied to the eyes.

Backache in Women.

Fenwick, according to an abstract in "New York Med. Jour.," states that there are four principal causes for backache in women:

1. Displacement of the uterus, the pain being due to the dragging on the uterine ligaments. The author recommends in many such cases the use of the Hodge or Zwancke pessary.

2. Pressure on the sacral nerves, due to constipation very frequently. In such cases he recommends the following:

℞.	Ferri phosphatis	gr. ii	12
	Ext. belladonnæ	gr. 1/4	015
	Ext. nucis vomicæ	gr. 1/4	015
	Ext. cascaræ sagradæ	gr. ii	12

M. Ft. pilula No. i. Sig.: One such to be taken three times a day after meals.

3. Muscular atony. The pain is located in lumbar and dorsal regions and found in anemic individuals with sedentary habits.

4. Affections of the cervix uteri, under which circumstances the treatment is surgical.

Medicolegal.

No Donation for Extra Services in Smallpox Epidemic.—Section 4424 of the Compiled Laws of Michigan directs that when there is any person in a township infected with the smallpox or other sickness dangerous to the public health the township board of health shall take needed action for the safety of the inhabitants, at the charge of the county when the person himself or the person liable for his support is not able to pay for same: "Provided, that the health board shall keep and render an itemized and separate account of expenses incurred in so caring for each person." It was suggested, in the case of the Village of Durand vs. Board of Supervisors of Shiawassee County, that this provision was directory to the board of health simply. But the Supreme Court of Michigan does not so regard it. It holds that the language of the clause is that of a proviso, and a proviso which affects the whole of the preceding section. And where, after a health officer had rendered a bill for specific services rendered in connection with an outbreak of smallpox and had received his pay therefor, the village paid him an additional sum for "extra services as health officer" during such epidemic and sought to recover the same from the county, the court declares that, however equitable the claim may have been as against the village, this statute certainly never contemplated that boards of health could bind the county by voluntary donations over and above the charges preferred by those having charge of these cases. The village had met the payment of this bill, and the court adds that it sees no reason why it should not bear the expense which was voluntarily incurred.

Death from Eating Unsound Oysters.—Unsound oysters produced the death of a man carrying an accident insurance policy by passing out of the large part of the stomach, lodging in the lower part of the stomach or upper intestine, inflaming the intestinal tract and mucous membrane, causing the same to enlarge, locking the bowels, obstructing and preventing passage, and thereby producing death. The company claimed that the policy exempted it from liability for "injuries, fatal or otherwise, resulting from poison or anything accidentally or otherwise taken, administered, absorbed or inhaled," and that the act of the insured in eating the oysters fell within the terms of said provision; that he ate them voluntarily, consciously and intentionally; therefore, they were not "accidentally" taken. But the Court of Civil Appeals of Texas holds against the company. It says, Maryland Casualty Company vs. Hudgins, that it was true the insured knowingly ate the oysters, but he did not know that he was eating unsound oysters. The effect was not the natural and probable consequence of eating sound oysters, and the effect produced by the eating of the unsound oysters could not have been reasonably anticipated or foreseen by him. It was unexpected, unforeseen and unusual, and, therefore, it could not be said that he voluntarily ate the unsound oysters. This being true, his death was caused by "accidental means," as that term was used in the policy. Furthermore, if it should be conceded that the court's position on this proposition was not sound, which it does not do, it says that it is still of the opinion that the word "anything," as used in the language "poison or anything accidentally or otherwise taken, administered, absorbed, or inhaled," did not refer to eating of food ordinarily harmless, not knowing it to be unsound and dangerous in that condition. It must be interpreted as having reference to those agencies which are not strictly denominated poison, but which have some elements of poison, and which may produce death if improperly taken.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Philadelphia Medical Journal.

May 2.

1 *A Case of Perforated Ulcer in Typhoid Fever. James C. Wilson and George G. Ross.
2 *Report of a Case of Painless Amputation of the Leg After the Intraneural Injection of Cocain. John H. Gibbon.
3 *Practical Points on Pessaries, Many Old, Some New. A. Ernest Gallant.
4 *The Radical Cure of Inguinal Hernia in Infants and Young Children. Charles G. Cumston.
5 *The Paradoxical Reaction of the Pupil in Accommodation, with a Report of Three Cases. William G. Spiller.
6 *A Study of the Brain-Weights of Men Notable in the Professions, Arts and Sciences. Edward A. Spitzka.
7 A Case of Endothelioma Occurring Within the Nasal Fossæ. Wm. Hitschler and George B. Wood.

1. **Typhoid Perforation.**—In Wilson and Ross' case the patient was nervous and restless and perspired freely eighteen to twenty hours prior to the probable time of the accident, and they ask whether the ulcer as it approached the peritoneal coat could not cause a vasomotor disturbance sufficient to account for the symptoms. When the perforation occurred the initial pain was referred to the penis and persisted there for twelve hours without being referred to the abdomen. The question is asked whether this pain could be due to the proximity of the inflammatory area to the ureter or bladder. There was a lack of collapse, the temperature remained high, no syncope, no vomiting, sweating or pain in the abdomen. Besides the unavoidable delay in making the physical diagnosis there was difficulty in securing consent for the operation, and hence the loss of valuable time. The patient died three hours after the operation with purulent peritonitis.

2. **Intraneural Injections of Cocain.**—Gibbon reports a case of painless amputation with good results under anesthesia pro-

duced by giving 1/4 gr. of morphin and 1/150 gr. of atropin hypodermically 15 minutes before the operation, and then exposing the sciatic and anterior crural nerves under infiltration anesthesia with Schleich's fluid and injecting them with a 1 per cent. cocain solution. The patient felt no pain and did not know that his foot had been amputated until the operation was finished. There was no evidence of shock, excepting a slightly increased pulse rate. Gibbon gives it as his belief that this method of producing anesthesia should be limited at this time to cases in which general anesthesia is contraindicated, but it certainly seems to him to have a wide field in the future practice of surgery.

3. **Pessaries.**—Gallant describes the conditions helped by the use of pessaries and the methods of their employment. He suggests the following precautions:

> When the pessary is in position (*a*) the vaginal wall should never be tense; (*b*) the lower bar must lie just behind the symphysis, invisible at the vulva; (*c*) it should be somewhat movable up and down and free from discomfort during coitus; (*d*) the wearer should not at any time feel conscious of its presence; (*e*) it must be removed at the end of the first week and the vagina examined for pressure points or any signs of irritation; it should then be replaced, and again removed at least once every four weeks, cleaned, polished with a dry towel, and reinserted; (*f*) the wearer must use daily a warm douche, to which may be added a tablespoonful of common salt, or two teaspoonfuls of sodium bicarbonate. These vaginal douches are of service only for cleansing purposes. Vaginal douches for the reduction of pelvic inflammation are injurious if not continued for at least 20 minutes, whereas rectal injections or continuous irrigations for an hour, once or twice daily, will exert an almost marvelous effect on recent pelvic inflammation, and in alleviating pain and tenderness, and for removing exudates in the old cases. For rectal injections he uses 2 quarts of water at 120 deg. F., to which have been added 2 ozs. hamamelis; the patient lying on her right side, her hips raised as high as possible and the legs flexed on the abdomen; allow the mixture to run in slowly, a few ounces at a time; encourage her to retain it as long as possible and lie still for an hour. In many instances the whole two quarts will be retained and will do her good. For continuous irrigation Kemp's tube has afforded the most satisfactory results.

No absolute cure of uterine displacements should be promised, but only symptomatic relief, and pessaries ought never to be used when there is present purulent vaginitis or fixation of the uterus, ovaries or tubes, pus tubes or pelvic enlargements.

4. **Hernia in Young Children.**—Cumston reports operations in children under two years old presenting different clinical phases, in two of them strangulation had taken place; one had a double hernia. All the children, with one exception, were in good physical condition and stood the operation well. No hard and fixed rules, he says, can be laid down as to the indications for radical cure. The most important one is strangulation. He does not believe in taxis in such cases. The Bassini operation has always been satisfactorily performed within one-half hour or less in his experience. He formulates the following conclusions:

> 1. Experience has demonstrated the innocuity of radical operation for hernia in infants. 2. The operation is indicated in all cases of strangulation, in all cases in which the contents of the sac can not be retained by a truss, and in every case in which irritation of the skin is produced by the mechanical appliance, and in children of the poor who can not receive the necessary and proper attention at their homes.

5. **Paradoxical Pupillary Accommodation Reaction.**—Three cases of this peculiarity are noticed by Spiller, in one of which there was unquestionably organic disease, though Piltz has said that it occurs only in functional disorders. The condition as understood is not the same as the better-known paradoxical reaction to light where the pupil becomes dilated under light stimulation. The condition here considered occurs only after accommodation.

6. **Brain Weights.**—Spitzka has collected 114 cases of brain weights of prominent individuals, of which 96 were suitable for analysis. He leaves out any mythical or complicated cases, and those to which valid objections could be made, and remarks in regard to the conditions as indicating atrophy or change from the actual condition during life. He finds there is a relatively greater number of heavy brains among noted individuals, as shown by the diagram he gives, and the average brain weights were higher in the United States and Canada than in Europe, in the individuals analyzed. The cases are tabulated according to the occupations, which show that the exact sciences, such as mathematics and astronomy, furnished men of heaviest brains, and next come the men of action, statesmen, politicians and military men. The creative arts come next, including among others three opera composers. The average of 45 representatives of the natural sciences is lowest of all, but still above the average of ordinary brain weights. While every rule has its exceptions, the inference that the intellectual status is in some way reflected in the mass and weight of the brain seems generally correct, but men devoted to higher intellectual occupations involving the most complex mental mechanism, those of men who have devised original lines of research and those of forceful characters are generally the heaviest.

Medical News, New York.

May 2.

8 *Indications for Extirpation of the Gall Bladder. Maurice H. Richardson.
9 *Some Practical Points in the Anatomy of the Gall Bladder Region. George E. Brewer.
10 *The Diagnosis of Gallstones. J. B. Murphy.
11 *The Mortality in Appendicitis; Its Cause and Limitation. A. J. Ochsner.
12 *Prompt Operation in the Beginning of the Attack Will Save Nearly All Cases of Appendicitis. A. C. Bernays.

8. **Cholecystectomy.**—Richardson is not an advocate of routine cholecystectomy, but points out its advantages in immediate healing and consequent lesser liability to hernia, the absence of any possibility of gallstones forming in the bladder or of a subsequent cholecystitis or malignant growths, and the minimum possibility of adhesions. On the other hand, there is no possibility of draining the biliary passages except through one of the ducts and that only after a difficult and usually unsatisfactory operation. In this lies the chief objection to cholecystectomy, for enforced and persistent drainage is one of the chief factors in bringing about the brilliant and permanent results seen after cholecystotomy. In most biliary affections, drainage is not only an advantage but an absolute necessity, and in removal of the gall bladder we dispense with an essential feature of the majority of cases of biliary surgery. There is also a greater danger in the operation. He sums up his conclusions as follows:

> 1. Certain lesions in themselves demand removal of the gall bladder whenever possible. Such are new growths and gangrenes.
> 2. Certain other lesions of the gall bladder are better treated by cholecystectomy. These are the contracted and inflamed gall bladders, with thickened walls. All gall bladders which do not permit easy and efficient drainage should be extirpated, for in such gall bladders the risks of drainage are quite as great as the risks of extirpation; and the one great advantage of retention is impossible—retention of the biliary reservoir to fulfill the functions of that reservoir, and to permit, if necessary, renewed drainage in future years.
> 3. Drainage is preferable in the dilated and infected gall bladder, which, however, is neither gangrenous nor to any great extent changed—the slightly thickened gall bladder containing gallstones and infected bile. This gall bladder will, after drainage, become normal, and therefore capable of fulfilling the functions of a gall bladder. Through it the biliary passages will become effectually drained, after subsidence of the temporary swelling about the cystic duct.
> 4. As a rule drainage rather than extirpation is demanded in acute cholecystitis with severe constitutional symptoms, when the gall bladder is dilated, or at least not contracted, and when it is not gangrenous.
> 5. In chronic cholecystitis, with dilatation and thickening of the gall bladder, especially when a stone is impacted in the cystic duct, extirpation is the preferable operation, unless the stone can be dislodged backward into the gall bladder, in which case drainage is, if not preferable, quite as advantageous as extirpation.
> 6. In simple gallstones, without visible evidence of infection or chronic changes incompatible with complete restoration of function, simple drainage of the gall bladder is indicated.
> 7. In chronic pancreatitis, whether associated with gallstones or not, drainage through the gall bladder is indicated. Cholecystectomy is unjustifiable, for immediate drainage is essential. Furthermore, reopening of the biliary passages may in the future be required.

9. **The Gall-Bladder Region.**—Brewer describes the anatomy of the bladder, its anomalies such as its absence, duplex gall bladder, variations in the ducts, etc.

10. **The Diagnosis of Gallstones.**—Murphy analyzes the various symptoms of gallstones, the pain, colic and their causes, vomiting, hypersensitiveness in the region, temperature, etc. In the relation of jaundice to pain, he formulates the following: 1. That jaundice due to gallstones is always preceded by colic; 2, that jaundice due to malignant disease, or catarrh of the ducts accompanied by infection, is never preceded by colic. The different classes of cases of gall-bladder infection are noticed, such as that characterized by pain,

vomiting, the types with characteristic recurrent chills, temperature, etc. The symptoms of stone in the common ducts and in the other ducts are all noted in detail.

11. **Appendicitis.**—Ochsner reiterates his views in regard to the management of appendicitis and the cause of its mortality, illustrating them by cases from practice. He considers that the mortality depends on the extension of the infection to the peritoneum and by metastatic infection, which can be prevented by removal of the appendix, while the infection is still confined to it. The distribution or extension of the infection is accomplished by the peristaltic action of the small intestines and also by operation after infectious material has extended beyond the appendix and before it has become circumscribed. He would fight peristalsis of the small intestine by prohibiting the use of every form of nourishment and cathartics by the mouth, using gastric lavage in order to remove any food or mucus from the stomach, and nourishing the patient for the necessary period of time by nutrient enemata. In this way dangerous cases of acute appendicitis can be changed into relatively harmless cases of chronic appendicitis, and the mortality following operations for the latter is exceedingly low. He offers the following suggestions:

1. Patients suffering from chronic recurrent appendicitis should be operated on during the interval.

2. Patients suffering from acute appendicitis should be operated on as soon as the diagnosis is made, provided they come under treatment while the infectious material is still confined to the appendix, if a competent surgeon is available.

3. Aside from insuring a low mortality this will prevent a series of complications, mentioned elsewhere in his paper.

4. In all cases of acute appendicitis without regard to the treatment contemplated, the administration of food and cathartics by mouth should be absolutely prohibited.

5. In case of nausea or vomiting or gaseous distention of the abdomen, gastric lavage should be employed.

6. In cases coming under treatment after the infection has extended beyond the tissues of the appendix, especially in the presence of beginning diffuse peritonitis, conclusions 4 and 5 should always be employed until the patient's condition makes operative interference safe.

7. In case no operation is performed, neither nourishment nor cathartics should be given by mouth until the patient has been free from pain and otherwise normal for at least four days.

8. During the beginning of this treatment not even water should be given by mouth, the thirst being quenched by rinsing the mouth with cold water and by the use of small enemata. Later small sips of very hot water frequently repeated may be given and still later small sips of cold water. There is danger in giving water too freely.

9. All practitioners of medicine and surgery, as well as the general public, should be impressed with the importance of prohibiting the use of cathartics and food by mouth in cases suffering from acute appendicitis.

10. It should be constantly borne in mind that even the slightest amount of liquid food of any kind given by mouth may give rise to dangerous peristalsis.

11. The most convenient form of rectal feeding consists in the use of one ounce of one of the various concentrated liquid predigested foods in the market, dissolved in three ounces of warm normal salt solution, introduced slowly through a soft catheter, inserted into the rectum a distance of two to three inches.

12. This form of treatment can not supplant the operative treatment of acute appendicitis, but it can and should be used to reduce the mortality by changing the class of cases in which the mortality is greatest into another class in which the mortality is very small after operation.

12. **Appendicitis.**—Bernays pleads for early operation. The absence of a tumor is a more pressing indication for immediate surgical interference than its presence. Whenever an operation for appendicitis is performed within twenty-four hours after the attack, it is successful in about 98 per cent. of all cases thus treated. He does not like these to be called early operations; they are only operations done at the proper time. The mortality of interval operations is also very low. He has had no deaths in over 400 cases, and as regards any special dangers in early operations, aside from the greater danger of the anesthetic in a few cases, he would say there are none. Operations done during the first day or two are easier and more complete than later operations. The whole answer to the question as to when to operate, is that we must operate early in the attack.

Boston Medical and Surgical Journal.

April 30.

13 Address to the Nurses Graduating from the Framingham Hospital in 1902. Arthur T. Cabot.
14 *Albumosuria. Chauncey R. Burr.
15 A Case of Juvenile Aortic Stenosis, with Subsequent Insufficiency, Sudden Death: Autopsy. Albert N. Blodgett.
16 Mountain Sanatoria for Tuberculosis. Walter Lindley.

14. **Albumosuria.**—Burr described albumosuria and the conditions in which it occurs and insists on the importance of the fact that, aside from lesions of the digestive tract, albumosuria is indicative of leucocytosis and peptonuria of pus absorption. He describes the tests, the only sure one being the saturation of urine at the boiling point with neutral ammonium sulphate; filter and wash the precipitate with saturated solution of ammonium sulphate. Dissolve the precipitate in water or dilute sodium chlorid solution and apply the biuret test. If albumoses are present a rose color results. The treatment is based on the indications mentioned above.

Medical Record, New York.

May 2.

17 *Cranial Form in Man, Together with Some Remarks on the Attitude of the Profession Toward Anthropology. Arthur Thomson.
18 *Reciprocity in Pathology. S. B. Laache.
19 *Antituberculous Campaign in Latin America. Emile R. Coni.
20 *The Expansion of a Specialty. Howard A. Kelly.

17. **Cranial Form in Man.**—The agencies operative in modifying the cranial form are stated by Thomson under two heads: 1. Those operative from within; 2, those operative from without. Considering all the facts, the increased size of the temporal muscle coincides with a greater development of the jaws and he finds a correlation between the coronoid index and the cephalic index, the higher coronoid index being usually associated with dolichocephaly while the lower coronoid indices are met with in skulls of the brachycephalic type. This, however, is from a comparatively small number of observations, and further study is required. Prolonged stress in the region of the pterion, by enlarged temporal muscles, has its effect on the contour of the cranium. Passing on to the consideration of the causes operating from within, he notices the work of Papillault, who has shown that the occurrence of the metopic suture is more common among races with large cranial capacity, and is due to a superiority in the bulk and relative weight of the cerebrum. He also refers to the observations of Boas, who has established that the height of the skull seems most closely associated with capacity, the length least so. To determine the effect of pressure from within, Thomson contrived an apparatus consisting of a rubber bladder fastened over the base of the skull with cords cemented to it representing the temporal muscles, to which could be attached weights. The varying degrees of the distension of the bladder illustrate the different types of the skull. His main point has been to prove that the shape of man's head in its highest development is the outcome of physical and intellectual environment which have led, on the one hand, to a reduction in the size of the jaws and on the other to increased volume of the brain.

18. **Pathologic Reciprocity.**—Laache's article is a consideration of the relations existing from a clinical point of view between the different organs and systems of organs.

19. **The Antituberculous Campaign in Latin America.**—Coni gives the history of the efforts made against tuberculosis in the Spanish and Portugese-speaking regions of the western continent.

20. **The Evolution of the Specialty.**—Kelly's article is an endeavor to show that while there exists a historical continuity in the use of the term gynecology, modern practice differs *toto coelo* from that of former times. The change is not a natural evolution, but an absolute transformation from a minor specialty to a general specialty of major surgery. The term gynecology, he thinks, is a misnomer to-day.

American Medicine, Philadelphia.

May 2.

21 *The Treatment of the Acute Diarrheas of Infancy. John L. Morse.
22 *Some Points Pertaining to the Therapeutic Management of the Uremic State. Heinrich Stern.
23 A Clinical and Statistical Review of 122 Cases of Albuminuria and 48 Cases of Eclampsia Occurring in the Maternity of the Hospital of the University of Pennsylvania. John C. Hirst.
24 *Syphilitic Toxemia Hemiplegia. Charles W. Burr.
25 An Interesting Complication in the Diagnosis of Gallstone. Guy L. Hunner.

26 *Peritonitis in Typhoid Fever without Perforation, with a Report of [illegible] by the Bacillus Typhosus and Another [illegible] Appendicitis. J. L. Yates.
27 The Society [illegible] Biology and Medicine. William J. Gies.

21. **Infantile Diarrheas.**—Morse describes the different types of bowel trouble in infants, the simple diarrheal, which is usually relieved by early removal of the cause, the infective diarrheas due to micro-organisms, to which he gives the name fermental diarrhea, ileocolitis and cholera infantum. In the fermental form the best treatment after purgation to remove the cause is to cut off all food for twenty-four hours, giving only sterile water and later employing a proteid diet with almost complete exclusion of sugar in cases of sour stools. In others, following the general principles and using milk preparations as soon as the stomach will bear them, but previously employing various substitutes which, he thinks, however, are largely effective through their weakness in nutritive material and consequent lack of taxing of the digestive organs. When beginning to use milk preparations, whey is often most useful, made either from whole or skimmed milk. It is prepared by adding a teaspoonful of essence of pepsin or a junket tablet to a pint of milk and heating to from 100 to 110 F. until it coagulates. Then strain through a napkin. A little cream may be added if the patient is doing well, heating first the whey to 150 F. to avoid curdling the cream. If whey is not used the infant should be given a modified milk prepared from fresh milk low in all percentages, highly alkaline and pasteurized. Breast feeding should not be forgotten. In many cases it will result in cure. For drugs he uses bismuth, preferring the ammoniocitrate. The special symptoms due to toxic absorption may require treatment; vomiting may be relieved by stomach washing, hyperpyrexia by cold bathing and the bromids be used for restlessness, and morphin if necessary; stimulants in cases of prostration and collapse, for which brandy and strychnin are most useful. The toxic symptoms are sometimes much relieved by subcutaneous injections of normal salt solution, which can be also given as an enema, though it is not likely to be retained. Ileocolitis, which has more serious pathologic lesions, must be treated along the same lines, but it is possible in this case to reach the seat of the disease from below and irrigation comes into play. Normal salt solution or 1 to 2 per cent. strength of boric acid are most useful. In some chronic cases weak irrigations of silver nitrate in the proportion of 1 to 1,000, one in two or three days, seem to hasten recovery. A strong salt solution should always be at hand when this is used in case its proves too irritating. In cholera infantum the main indications are to empty the stomach and bowels of their toxic contents, supply food to the tissues which are being seriously drained, restore surface circulation and reduce the temperature and keep the patient alive until the disease has run its course. He depends mainly on stomach washing and intestinal irrigations used early and vigorously, and stimulants given subcutaneously.

22. **The Uremic State.**—Stern calls particular attention to the retention nitrogen, that remaining in the blood after complete removal of albuminous substances, as having an important causative relationship to uremia. He considers the promotion of perspiration a very important measure in almost every case, though it is of little value after a pronounced comatose condition has supervened or the attack has persisted for a long time. Enteroclysis should also be performed with weak chlorid solution, or hypodermoclysis with a hypotonic solution of NaCl should be performed at certain intervals. In many cases venesection is of use, though it is bad in advanced asthenic conditions. Much stress is laid on the use of hypodermoclysis and infusion. An isotonic chlorid solution containing 0.9 per cent. of sodium chlorid is not quite as efficient in uremia as one which is slightly weaker, 0.6 per cent. The minimum amount used should never be less than 125 c.c. injected intravenously and 250 c.c. when administered by hypodermoclysis. It should be used slightly above the normal blood heat. When, after the employment of chloroform, vasoconstriction and convulsive phenomena do not diminish, a small dose of morphin may be resorted to and help to bridge over a critical period. It is not indicated, however, in uremia of chronic interstitial nephritis, which rarely shows convulsive phenomena, but is comagenous itself, and here it might hasten the fatal issue.

24. **Syphilitic Toxemic Hemiplegia.**—Burr describes the case of a young woman who, in recovering from a spree, suffered from a headache, became queer and dazed, and the next day fell unconscious and convulsed, the convulsive movements lasting many hours, the unconsciousness several days. During this time a slowly oncoming hemiplegia preceded by dilatation of the left pupil developed, and later there were changes in the reflexes and left-sided ptosis. Consciousness slowly returned and later hemiplegia and other symptoms, barring a slight pupillary disturbance, passed away. A study of the case excluded other causes such as hemorrhage, blood poisoning, etc., and the diagnosis of a syphilitic origin was made by exclusion. The only positive evidence of syphilis was the patient's endurance of the specific treatment, and the character of the symptoms.

26. **Peritonitis Without Perforation in Typhoid.**—The following are the conclusions offered by Yates after a discussion of the condition and detailed reports of cases:

1. Non-perforative peritonitis usually results from an extension of inflammation through the bases of deep intestinal ulcers, but may also arise from the migration of bacteria through an intestinal wall which is relatively but slightly abnormal.
2. Meteorism thus predisposes to infection of the peritoneal cavity and by decreasing the normal peritoneal absorption furnishes a secondary cause for peritonitis.
3. An hematogenous origin of peritonitis is possible in typhoid fever.
4. Non-perforative peritonitis is commonly caused by the typhoid bacillus and the resulting inflammation is usually diffuse and often severe.
5. The inception of such a peritonitis is clinically indistinguishable from the so called signs of perforation, and the symptoms in both are due to peritoneal inflammation. The prognosis is probably equally grave in the two forms.
6. There should be appropriate surgical intervention immediately the peritonitis can be recognized. Enterostomy is indicated when there is meteorism with the peritonitis or when it affects the prognosis and is intractable to ordinary therapeutics.
7. Thrombi, and among them those composed of agglutinated red blood-corpuscles, may lead to hemorrhages into the wall of the intestine and the resulting changes favor the transmigration of bacteria into the peritoneal cavity.
8. Infarction of the spleen may have a similar thrombotic causation, but simple splenic infarction is probably not a cause of peritonitis.
9. The specific action on human blood of an agglutinin generated by the typhoid bacillus can be demonstrated *in vitro*.

New York Medical Journal.

May 2.

28 *The Tendo Achillis Shortened for the Restoration of the Function of the Calf, Lost as a Result of a Previous Tenotomy. Russell A. Hibbs.
29 A Case of Nevus of the Scalp and Nose Treated by Hot Water Injections. Frederic Griffith.
30 *The Treatment of Gastric and Duodenal Hemorrhages. Max Einhorn.
31 *The Uses of Suprarenal Extract in Nose and Throat Diseases. Beaman Douglass.
32 *The Operative Treatment of Stenosis of the Larynx Following Intubation and Tracheotomy. Report and Exhibition of Cases. Arthur B. Duel.
33 An Anastomosis Ring. William L. Keller.
34 Suprascrotal Operation for Varicocele, with Ligature of the Spermatic Artery. E. Styles Potter.

28. **Shortening of the Tendo Achillis.**—Hibbs reports several cases in which shortening of the tendon was performed on account of an earlier tenotomy and the loss of power of the calf muscles. The operation for shortening revealed dissimilarity in every particular of the structure filling the gap between the ends of the old tendon to normal tendon structure, which he thinks points out that subcutaneous division of the tendo Achillis is not always so successful as it has been considered; that while in some cases the reproduced structure seems to be sufficiently strong to perform the function of tendon, in others this is not so, and one can not be sure in any case what will be the result. There must be some conditions necessary for complete success and these are, he thinks: 1, the preservation of the sheath, and 2, the preservation of the continuity of the tendon. These can not be secured except by open operation.

30. **Gastric and Duodenal Hemorrhages.**—Einhorn discusses the treatment by rest in bed, abstinence from food, use of ice,

etc., as rational methods. He has had good results from the subcutaneous use of gelatin and would recommend it. Adrenalin is also of value, and he has experimented on rabbits to show its effects, which indicate a distinct value of the local application of the drug on the bleeding area. He has used it, injecting a solution of adrenalin chlorid, 1 to 2,000 subcutaneously twice daily in 2 cases of gastric hemorrhages, with apparently good results, and has also tried spraying the stomach with a 1 to 5,000 solution. Further clinical tests will be required. Heart stimulants must be employed in most cases of gastric and duodenal hemorrhage besides the other measures of avoidance of exertion, rational feeding, and using iron, arsenic, and bone marrow with the tentative use of gelatin and adrenalin. The indications for surgical intervention, excision or cautery of bleeding area or gastroenterostomy, are very profuse hemorrhages at short intervals; profuse gastric and duodenal hemorrhages occurring once or twice yearly and greatly endangering the life of the patient. These require the interval or prophylactic operation. Frequent small hemorrhages of the stomach or duodenum, which greatly debilitate the patient and can not be stopped by rational therapeutics, often demand operative measures and here gastroenterostomy is usually advisable.

31. **Suprarenal Extract.**—The uses of this drug are reviewed by Douglass, who finds it specially valuable in diminishing bleeding and hemorrhages during nasal operations. It has its limitations and possible drawbacks, and he has not seen much good from it in operations on the adenoid tissues. In hemorrhage after tonsillotomy, hydrogen peroxid seems to him to work better. The suprarenal has also its value in diagnosis, in differentiating congested from hypertrophied tissues. In acute inflammatory conditions of the nose, pharynx and larynx, it is one of the best remedies.

32. **Stenosis of the Larynx.**—Three cases are reported by Duel to emphasize the points made by Rogers in his paper in the "Annals of Surgery" for May, 1900, on the retained intubation tube. The principal points to remember are that about 1 per cent. of all patients intubated for acute laryngeal stenosis will "retain" the tube. This is due in most cases to chronic inflammation of the intralaryngeal mucosa and subglottic tissues, and is not the result of granulation or cicatricial bands, etc. Auto-extubation in these cases is the rule and greatly adds to the danger, and as a result of this tracheotomy is often performed for safety. Where high tracheotomies are done, cicatricial bands are almost certain to form in the trachea or lower part of the larynx above the tracheotomy wounds. The points in the treatment to be emphasized are the use of the largest possible sized tube under anesthesia. In case of contraction, rapid dilatation should be done by beginning with the small sizes and working up to the large special tube, which is to be left in place. This tube should be left in for at least six weeks and then removed, and in failure of recovery it should be replaced for six weeks longer. He is in favor of splitting the larynx and holding the tube in place by means of the retaining clamp early in such cases, rather than resorting to tracheotomy, which adds cicatricial bands to the already existing complications.

Cincinnati Lancet-Clinic.

May 2.

35 The Urinary Secretion: Its Obstetrical and Gynecological Considerations. Chauncey D. Palmer.
36 The Psychological Factor in Medicine and Its Application to Nervous Disease. John Punton.
37 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

St. Louis Medical Review.

April 25.

38 Fatal Hemorrhage from Conjunctiva in the New-Born; with Report of Case. Meyer Wiener.
39 Prophylactic Treatment of the Eyes in the New-Born. Hugo Ehrenfest.
40 The Treatment of Ophthalmia Neonatorum. John Green, Jr.

Northwestern Lancet, Minneapolis.

May 1.

41 *The X-rays in Medical Diagnosis. Soren P. Rees.
42 So-called Chronic Catarrhal Endometritis. A. W. Abbott.

41. **X-Rays in Medical Diagnosis.**—Rees finds a decided value in the *x*-rays aside from their surgical use, not merely in the treatment of cancer, hypertrichosis, etc., but in medical diagnosis. The chest appearances are specially noted and the possibilities of determining tuberculous lesions, pneumonia, emphysema, pleurisy, where doubt exists, are pointed out. Any abnormality in size, shape, position or movement of the heart is readily discovered when the lung casts a normal or lighter shadow. A comparison between the outlines obtained by percussion and those by the fluoroscope shows what a material aid the latter is in determining the size of the heart. It has been shown that the apparent enlargement of the heart in cases of chlorosis is in many cases merely a change in the long axis of the heart from the vertical to the more oblique. Pericardial effusion, adhesions and displacements are apparent with a certainty that is otherwise impossible. In thorax aneurism and in the early stages of many aneurisms, when the prognosis would be most favorable if the condition could be ascertained, the *x*-rays come into special use, and deeply seated, enlarged glands, tumors, etc., are also detected. By means of a metallic sound or soft rubber tube filled with mercury or shot after its insertion, a diverticulum or stricture of the esophagus is demonstrated. The abdominal and pelvic organs do not show the same differences in density as in the thorax, and the ray is less satisfactory. Using certain precautions such as a brisk purge, freedom of the stomach from food, doing away with clothing, etc., much can be done, however, in determining conditions below the diaphragm. The importance of having a skilled physician to interpret the appearances is emphasized. Cases of calculus of the gall bladder, kidney and uterus, especially show the uses of the *x*-ray. Rees finishes with the following conclusions:

> 1. That the *x*-ray is a very valuable aid in the diagnosis of many medical diseases, and of primary importance in the diagnosis of several. 2. That for the internist, at least, who confines his work largely to chronic ailments, it becomes especially valuable, and that it is entirely feasible for him to make office examinations of suitable cases. 3. That the rapid improvement in apparatus and technic and the need of careful training on the part of the observer, will prevent for some time its successful employment by the ordinary practitioner. 4. That while we must admit an idiosyncrasy to the *x*-ray in some persons, the danger of burn to the operator and to the patient, if proper precautions are taken, is very small.

Journal of Tuberculosis, Asheville, N. C.

April.

43 *Pulmonary Tuberculosis. Aufrecht (Magdeburg).
44 *The Mode of Infection in Tuberculosis and Measures for Its Prevention. F. M. Pottenger.
45 Origin and Growth of Sanatoria for Tuberculosis in Massachusetts. Vincent Y. Bowditch.
46 *Auxiliaries in the Treatment of Consumptives. Otto Juettner.
47 Report of 309 Cases of Pulmonary Tuberculosis, with Remarks on Classification and Treatment Employed. Karl von Ruck.

43. **Pulmonary Tuberculosis.**—Aufrecht combats the ordinary idea of infection by inhalation and the dangers of the contagiousness of the disease. The method of its entrance into the system he holds is ordinarily through the tonsils and from these to the lymphatics and thence through the vessels to the lung tissue. There may be a formation of cheesy foci in the apex due to entrance of the bacilli into the smaller branches of the pulmonary artery as in ordinary chronic tuberculosis. In what he calls subacute pulmonary tuberculosis very numerous cheesy tubercles may occur throughout the whole lung tissue, caused by sudden invasion by hordes of bacilli through the pulmonary artery. Recovery in this form is still possible. Lastly, the pulmonary tuberculosis may be only a partial phenomenon of an acute general miliary tuberculosis traceable to overwhelming of the whole body by tubercle bacilli through the systemic circulation.

44. **Mode of Infection of Tuberculosis.**—Pottenger's views are much like those of Aufrecht as regards the mode of infection. He thinks that, in a very large proportion of the cases, the bacilli are taken into the body by the mucous membranes of the upper respiratory and digestive tracts. When once through the mucous membrane they find themselves in the lymph spaces, whence they are carried and deposited in the neighboring or some remote lymph gland, or find their way

through the thoracic duct into the pulmonary circulation, to be strained out by the small vessels of the lungs. He insists on the importance of precautionary measures against tuberculosis infection.

46. **The Treatment of Tuberculosis.**—Juettner discusses the methods of massage and chest gymnastics, oxygen and ozone inhalation, the use of high frequency currents, photo- and Roentgen-ray therapy and hydrotherapy.

Pediatrics, New York.

April.

48 *A Contribution to the Natural History of Diphtheria. H. Illoway.

48. **Diphtheria.**—Two cases are reported by Illoway. He offers certain conclusions, affirming that diphtheria is a self-limited disease and when placed under proper conditions tends to recover. Even grave dyspnea does not necessarily indicate a fatal issue; nature may work out its own salvation. Diphtheria following on measles is a grave affection, and all such cases in his experience as were tracheotomied or intubated, died. He concludes with the report of a case of tonsillar diphtheria which he finds has also the same natural tendency to recovery, though it may produce very marked constitutional disturbance with but trifling local manifestations. The case also points out the advantages of digitalis as a cardiac regulator and a controller of temperature.

Pennsylvania Medical Journal, Pittsburg.

March.

49 Address in Obstetrics, Medical Society of the State of Pennsylvania. J. M. Baldy.
50 *A Further Report on the Treatment of Tic Douloureux by Division of the Sensory Root of the Gasserian Ganglion. Charles H. Frazier.

April.

51 *Unilateral Renal Hematuria. Augustus A. Eshner.
52 The Rôle of the Cystoscope in the Diagnosis and Treatment of Some Diseases of the Urinary Tract. Charles P. Noble.
53 *Fistula between Gall Bladder and Stomach. A. Barr Snively.

50. **Tic Douloureux.**—Frazier offers a further report on the advantages of section of the sensory branch of the fifth nerve in place of extirpation of the gasserian ganglion in obstinate cases of neuralgia. He enumerates among the advantages claimed for division of the sensory root that it obviates a number of difficulties, especially hemorrhage, which is the greatest bugbear in gasserian extirpation. It usually occurs from three sources: 1. From the middle meningeal artery. 2. From the emissary veins. 3. From the cavernous sinus. As regards hemorrhage from the middle meningeal, the two operations are on a par, but as regards the other two sources of hemorrhage, section of the sensory root avoids hemorrhage, and the chances of injuring the adjacent structures are also very much lessened and there is a decided reduction in the rate of mortality.

51. **Unilateral Renal Hematuria.**—Eshner reports a case presenting symptoms of renal calculus with hematuria in which, after exposure of the kidney, nothing abnormal was found, but the symptoms disappeared permanently. He discusses the literature at length and gives a summary of the reported case, together with an analysis. He concludes that there occurs occasionally, in men and women alike, mostly at middle adult life, hemorrhage from a single kidney, from either with equal frequency, in many cases from demonstrable organic disorder and in others of obscure or unknown origin. This hematuria may cease after simple exposure of the kidney, or after nephropexy or nephrotomy or, in the failure of these, after nephrectomy.

53.—This article appeared in The Journal of April 11, p. 963.

Ophthalmic Record, Chicago.

April.

54 Confessions of a Traveler. (Continued.) Albert B. Hale.
55 Mucocele of the Left Inferior Lachrymal Canaliculus. George T. Brady.
56 *Glaucoma Malignum—Report of a Case with Recovery of Vision. H. E. Peterman.
57 *Amblyopia with Slow Recovery of Vision After Extraction of Very Old Cataracts. H. Moulton.
58 *A New Method of Preventing Infection from the Conjunctiva After Operations Involving Opening the Anterior Chamber. E. C. Ellett.
59 A Tumor of the Dura Mater Covered by the Cerebellum, Located in the Posterior Fossa of the Skull; Some of the Symptoms Resulting Therefrom. William L. Bullard.

56. **Glaucoma.**—Peterman reports a case of malignant glaucoma which recovered. It was associated with astigmatism "against the rule" in both eyes, and the second eye became infected with glaucoma two years and three months after the first. Iridectomy was performed and malignant glaucoma did not occur. In conclusion he remarks on the effects of the salicylates in these cases.

57. **Amblyopia with Slow Recovery After Cataract Operation.**—Moulton reports two cases of amblyopia from disuse. The patients were operated on for cataract, but sight return was very gradual in spite of perfectly clear media and healthy fundus. Several months were required for perfect restoration.

58. **Prevention of Conjunctival Infection.**—In order to prevent infection of the corneal wound from the lachrymal passages, Ellett operated by incising the conjunctiva all around the cornea as in case of enucleation, then dissecting it up from the ball by means of a probe, care being taken to free it well in the upward and downward directions to a distance of about half an inch from the limbus. The cataract was extracted by the combined operation and the cut edges of the conjunctiva then picked up and drawn upward and downward until they met over the cornea and were united by a horizontal row of stitches so as to completely cover it. No apparent gap was left and iodoform was thickly dusted over the line of union and the eye covered with a light gauze dressing. The eye was irrigated every hour with boric solution and iodoform reapplied. After the fourth day, when the ball seemed to have regained its natural contour, the stitches were removed and the conjunctival edges spontaneously separated and the corneal wound was seen to have closed. The whole cornea was exposed about three days after the removal of the stitches, the conjunctiva attaching itself again in its normal position.

Illinois Medical Journal, Springfield.

May.

60 *The Diagnosis of Chronic Interstitial Nephritis Based upon Physical Signs, Chiefly Cardio-Vascular. Charles L. Mix.
61 *Malarial Hematuria with Etiology, Symptoms, Diagnosis and Treatment. M. L. Winstead.
62 The Technic and Possibilities of Endovesical Operative Procedures. Louis E. Schmidt.
63 The Adolescent Girl. Rhoda G. Yolton.
64 Hydro- and Electro-Therapy in the Treatment of Diseases of the Alimentary Tract. E. M. Eckard.
65 *Concerning a New Series of Synthetic Salts; the Nucleids of Iron, Copper, Mercury and Silver. E. R. Larned.
66 *System in Medical Practice. Carl E. Black.
67 *Surgery of the Prostate. John B. Murphy.

60.—This article has appeared elsewhere. See The Journal of April 4, title 48, p. 937.

61. **Malarial Hematuria.**—Winstead holds that malarial hematuria is a toxemia due to retained poisons within the circulation which quinin has no power to eliminate. The malarial parasite is not its direct cause. Elimination of these toxins by the bowels and the kidneys is the first imperative duty in the treatment, afterwards fortifying the system against them by quinin and other tonics.

65. **The Nucleids.**—Larned reviews the literature of the nucleinic acid salts and offers the following deductions in conclusion:

1. These new salts of nucleinic acid are rational reconstructives; they are true tonics. They increase physiologic resistance: they increase the functional activity of the secretory organs. 2. They are powerful germicides, while not harmful but beneficial to the tissues. 3. If our present knowledge of nucleins and leucocytosis is correct, then the nucleid is the proper form for administration of metals. 4. We do not positively know the rationale of their action, but we have nothing which holds out such prospects for successful medication. 5. These new synthetic salts are valuable additions to the pharmacopeia.

66. **System in Medical Practice.**—Black's article is an elaborate description of a plan of keeping records and accounts according to the card system, following the Melville Dewey classification.

67. **Surgery of the Prostate.**—Murphy favors the perineal route in prostatectomy as less dangerous than the suprapubic

or Bottini operation, as less liable to cause hemorrhage, sepsis or injury to the neighboring structures, favoring drainage and rapid restoration, shortening period of wound repair, favoring retention of vesical control and relief of vesical irritation. The sexual power is destroyed. He reports a large number of cases, with numerous illustrations.

Medical Fortnightly, St. Louis.

April 27

68 Some Reports of Cases of Fibroid Tumors of the Uterus. J[illegible] Mat[illegible]
69 Surgery of the Pancreas (Historical and Experimental). Benjamin M. Ricketts

Virginia Medical Semi-Monthly, Richmond.

April 1,

70 Cases in Practice and Comments Thereon. R. S. Martin
71 Two Cases of Clubfoot Associated with Maternal Impressions. P[illegible] B. Green.
72 D[illegible]. O. C. K[illegible]
73 Case of Strangulated Femoral Hernia Operated on Under M[illegible]. W. H. [illegible]
74 Mouth Breathing. Clifton M. Miller
75 Some Facts About a New Hypnotic—Hedonal. J. Julius Mar[illegible]
76 Operation for Cataract with Report of 65 Cases. E. Oliver Belt.

American Practitioner and News, Louisville, Ky.

February 1

77 Management of Normal Cases of Labor. J. J. Adams

Medical Age, Detroit, Mich.

April 25.

78 Conservative Treatment of Uterine Displacement. J. M. Ing-
79 The Lying-in Chamber. Minnie C. T. Love
80 S[illegible] in Children. C. C. Mapes.

Richmond Journal of Practice.

May

81 Mouth Breathing. Clifton M. Miller.
82 Chloroform as a Surgical Anesthetic and Its Administration. Manfred Call

Canadian Journal of Medicine and Surgery, Toronto.

May

83 Dr. James H. Richardson, One of Toronto's Grand Old Medical Men. W. A. Young.
84 Legislation Needed for the Preservation of the Teeth of the School Children of Canada. E. Herbert Adams.

International Journal of Surgery, New York.

May

85 Report of 1,163 Surgical Cases Occurring During Two Months Service at St. Vincent's Hospital, February and March, 1903. F. S. Dennis.
86 Some Observations on Acute Osteomyelitis. Howard Lilienthal.
87 Adenoids in the Rhinopharynx. Charles H. Knight
88 Acute Inflammatory Atrophy of the Osseous Tissues. Carl Beck.
89 Operative Treatment of Retroversion of the Uterus. J. T. Field.
90 The Surgical Assistant (Continued.) Walter M. Brickner
91 The Value of Free Incisions in Abdominal Section. Leroy Broun.
92 Improvement of the Lewis Carbolic Injections for Hydrocele. John A. Bodine
93 Perineal Section for Removal of Calculus from Bladder: Abscess of the Kidney; Replantation of Teeth, Priapism. S. D. Van Meter

American Medical Compend, Toledo, Ohio.

May.

94 On Corneal Opacities. George F. Suker.
95 Gastric Muscle Fatigue and Distention. Fenton B. Turck
96 Uremia. E. W. D[illegible]
97 P[illegible] Aneurisms. J. N. Gar[illegible]
98 Anesthesia and Anesthetics. W. W. Grube.

New Orleans Medical and Surgical Journal.

May.

99 The Art of Medicine—Some Ideals, Old and New. Isadore Dyer.
100 Notes on the Health Matters in New Orleans. Quitman Kohnke.
101 A Case of [illegible] Type. Randolph Hunt.

Medical Sentinel, Portland, Ore.

April

102 The Practice of Medicine as a Career. C. J. Smith
103 A Case of Intussusception without Obstruction. Ed. E. [illegible]
104 [illegible]. George W. L[illegible]
105 [illegible]. J. F. Hall
106 [illegible] in Infancy. W. P. C[illegible]
107 [illegible] of Typhoid Fever. L. F. Griffith

Medical Review of Reviews, New York.

April 25

108 Preliminary Treatment in Minor Gynecological Surgery. William B. Smith

Texas Medical News, Austin.

April.

109 The Criminal Insane. G. H. Moody.
110 A New Instrument for the Radical Treatment of Chronic Hypertrophic Tonsillitis, with Remarks as to "Causalis Indicatus." E. L. Burton.
111 A Plea for More Accuracy in the Diagnosis of Lues in Its Initial Stage. Wm. F. Bernart.
112 An Operation for Cholecystotomy. W. W. Lynch.

Detroit Medical Journal.

April

113 Diagnosis and Surgical Treatment of Tuberculosis of the Kidney. Ramon Guiteras.
114 Pus from the Upper Urinary Tract. Frederick W. Robbins.
115 Spontaneous Rupture of Skin Covering Umbilical Hernia—Gangrene of Intestine—Resection of Hernia—Recovery. William Bishop

Therapeutic Gazette, Detroit, Mich.

April 15.

116 Carcinoma and Myoma Uteri. Removal of One Ovary and Part of the Second for Inflammation. E. E. Montgomery.
117 A Case of Bromoform Poisoning. Henry K. Dillard, Jr.
118 Medicinal Chemicals. Virgil Coblentz.
119 Jaesche-Arlt Operation for Organic Entropion or Trichiasis. A. S. U. Anderson
120 Treatment of Prostatic Hypertrophy. (Concluded.) Edward Martin
121 Gastric Lavage. Thomas H. Stucky

Northwest Medicine, Seattle, Wash.

April.

122 Malignant Disease of the Common Bile Duct. William J. Mayo
123 Acute Articular Rheumatism. H. M. Read
124 The Medical Expert. F. M. Conn.
125 Report on Bubonic Plague in California. J. R. Booth.
126 Etiology of Ectopic Pregnancy. J. L. Panton
127 Diagnosis of Ectopic Pregnancy. W. W. Skene
128 Two Cases of Chewing Gum in the Bladder. J. B. Eagleson
129 A Kidney in the Umbilical Cord. Geo. M. Horton.

International Medical Magazine, New York.

April

130 The Causation of Hypertrophy and Dilatation of the Heart. A. O. J. Kelly.
131 Dilatation and Hypertrophy of the Heart from Physiologic Standpoint. William S. Wadsworth.
132 Diagnosis of Hypertrophy and Dilatation of the Heart. Samuel Wolfe.
133 The Place of Drugs in Cardiac Dilatation. Henry Beates, Jr.
134 The Selection of Cardiac Cases for, and Their Management at, High Altitudes. S. Edwin Solly.
135 Diet and Hygiene in Hypertrophy and Dilatation of the Heart. Henry L. Elsner.
136 The Mimicry of Cardiac Affections by Neurasthenia. Charles W. Burr.
137 The Treatment of Cardiac Hypertrophy and Dilatation. Roland G. Curtin.
138 The Rôle of Impaired Digestion and Faulty Metabolism in Overtaxing the Heart. Boardman Reed.

Louisville Monthly Journal of Medicine and Surgery.

May.

139 The Present Status of X-Ray Therapeutics. Thomas L. Butler.
140 Early Diagnosis of Cancer of the Stomach. Oscar E. Bloch.
141 Anent Urinalysis. Hugh R. Manning.
142 Some Injuries of the Knee Joint. E. C. Falconer
143 The Causal Relation of Defective Eyesight to Some Morbid Nervous Phenomena. A. P. Banfield.
144 Crime and Its Causes. H. L. Appleton.
145 Radical Treatment of Mastoiditis, with Report of Cases. Robert E. Moss.

Mississippi Medical Record, Vicksburg.

May.

146 Injury of the Eyeball; Report of Five Cases. M. H. Bell.

Canadian Practitioner and Review, Toronto.

April.

147 An Anomalous Case of Typhoid Fever. Robert J. Dwyer.
148 Report of Gynecological Clinic at the New York School of Clinical Medicine. Augustin H. Goelet.
149 Symptoms and Treatment of Calculus Anuria. E. L. Keyes, Jr.

Columbus Medical Journal.

April

150 Tuberculosis and the Sanatorium. John H. Lowman.
151 Remarks Concerning the Diagnosis of Recently Acquired Syphilis. Starling S. Wilcox.
152 Tricuspid Regurgitation. William E. Allaman.

St. Paul Medical Journal.

May

153 Concerning an Ideal City Water Supply. George W. Fuller
154 Stone in the Bladder and Hypertrophy of the Prostate. Archibald MacLaren
155 Tuberculosis. Its Prevention and Its Treatment Otherwise Than by the Use of Drugs. G. S. Wattam.
156 Hay Fever. J. H. James
157 A Case of Idiopathic Anemia with Pronounced Involvement of the Nervous System. Charles R. Ball.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

April 25.

1 *Importance of an Early Diagnosis of Cancer of the Stomach, with a View to Radical Treatment, with Remarks on Operative Results, Immediate and Remote. A. W. Mayo Robson.
2 *The Surgical Treatment of Gastric Ulcer. C. Mansell Moullin.
3 Case of Partial Gastrectomy, with Remarks on the Treatment of Malignant Disease of the Stomach. B. G. A. Moynihan.
4 Case of Chronic Pancreatitis, with an Account of the Postmortem Examination. Gilbert Barling.
5 An Analysis of 110 Operations for Strangulated Hernia. William Thorburn.
6. Two Cases of Interstitial Nephritis in Congenital Syphilis. G. A. Sutherland and J. W. T. Walker.
7 *Knock-out Blows. James G. Duncanson.

1. Gastric Cancer.—The symptoms, diagnosis, physical examination and treatment of gastric cancer are reviewed by Robson, who gives illustrative cases. He says he trusts he has advanced sufficient evidence to prove:

1. How desirable it is to make an early diagnosis of cancer of the stomach in order that a radical operation may be performed at the earliest possible moment. 2. That it may be needful to perform an exploratory operation in order to complete or confirm the diagnosis. 3. That such an exploration may be done with little or no risk in the early stages of the disease. 4. That even where the disease is more advanced and a tumor perceptible, an exploratory operation is, as a rule, still advisable in order to carry out radical or palliative treatment. 5. That, where the disease is too extensive for any radical operation to be done, the palliative operation of gastroenterostomy, which can be done with very small risk, may considerably prolong life and make the remainder of it much more comfortable and happy. 6. That some cases, thought at the time to be cancer, too extensive for removal may, after gastroenterostomy, clear up completely and get quite well. 7. That in cases of disease of the cardiac end of the stomach too extensive for removal, the operation of gastrostomy may considerably prolong life and prove of great comfort to the patient by preventing death from starvation. 8. That even where the disease is too extensive either for removal or for gastroenterostomy being performed with a fair chance of success, the operation of jejunostomy may occasionally prave of service to the patient. 9. That where a radical operation can be performed the thorough removal of the disease may bring about as much relief to the patient as does the operation for removal of cancer in the breast, uterus and other organs of the body, and that in some cases a complete cure may follow.

2. Gastric Ulcer.—In 500 cases of gastric ulcer treated at the London Hospital in 1897 to 1902 there were nearly 10 per cent. of deaths from peritonitis, 13, or 2.5 per cent., from hematemesis, and 5.5 per cent. from other causes, or a total of about, approximately, 18 per cent. out of the 500 cases. No less than 211 had suffered previously, about two-fifths of the total. Counting the 18 per cent. of deaths and 42 per cent. of relapses, the ratio of cures in a surgical sense could hardly be considered a high one. Moullin points out that operation in these cases is not only feasible but sufficiently safe to justify its recommendation. He has operated on 15 cases, with 2 deaths, and in some of these, operated on for hematemesis, the loss of blood was so great that transfusion had to be performed on the table or immediately after. He considers a logical classification of gastric ulcer impossible. In the acute cases there are two indications for operation, threatened perforation and hemorrhage. The former can rarely be diagnosed beforehand. One special symptom that indicates the spread of ulceration is persistent cutaneous hyperesthesia in Head's epigastric triangle, especially when combined with a similar condition of the corresponding dorsal point. This means something going on in the wall of the stomach sufficient to render the corresponding spinal nerve segment unduly sensitive. He would recommend exploration when this symptom is present. A single hemorrhage is rarely fatal. Bleeding will stop if the stomach is given absolute rest, but if the pulse rate continues to grow quicker and quicker and the well-known restlessness and yawning has set in, he recommends exploration. He would also follow the same plan for a second severe hemorrhage occurring within a few days of the first and when the hemorrhage, though comparatively slight, returns repeatedly.

7. Knock-Out Blows.—The general impression that there is only one knock-out blow, that under the jaw, is an error, according to Duncanson. Even with boxing gloves now used, there are a number of such blows, and some may even be fatal. The temple is especially vulnerable, and a blow there may be followed by laceration of brain substance with hemorrhage. A swinging short-arm blow on the ear may cause rupture of the tympanum, dizziness and collapse, and a dangerous blow may be delivered on the neck so that when the head is pushed back, the side of the neck being exposed, the gloved hand is driven forcibly on a spot midway between the angle of the jaw and the sterno-clavicular articulation (the carotid hit). Another point is just on the larynx or hyoid bone. The danger in these blows is in the concussion through the large and important nerve trunks. A severe blow delivered on the chest wall about the region of the heart may cause syncope and death, especially if the muscles of the chest walls are relaxed and the lungs not expanded. Diaphragmatic blows are not, as a rule, dangerous to life. There is collapse, with difficulty in getting breath and sometimes unconsciousness. Brisk rubbing, external warmth and, if necessary, stimulants are the best treatment. Blows over the kidneys are somewhat perilous, and a blow over the pit of the stomach or what is called the "mark," a special area the size of the palm of the hand and corresponding with the center of the triangle formed by the xiphosternal articulation above and a line joining the bony ends of the seventh ribs below, just over the pyloric end of the stomach. The effects are due, according to Edgeworth Johnstone, to irritation of the pneumogastric setting up cardiac failure. The pugilist speaks of knock-out blows over the solar plexus, but it is the stomach that receives the shock and from it the nerve disturbance originates. When a man is knocked out and does not speedily rally, the best treatment is to get him away from his surroundings as soon as possible, wrap him well in warm blankets in bed and administer stimulants—strychnia hypodermically if necessary. Of course, if more serious lesions exist, such as fracture, the treatment must be conducted on recognized surgical lines.

The Lancet, London.

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8 The Symptoms and Diagnosis of Stone in the Kidney. R. Clement Lucas.
9 *Infective Endocarditis Mainly in Its Clinical Aspects. T. R. Glynn.
10 *Dietetics. Robert Hutchison.
11 *The Drainage of the Knee-joint in Acute Suppurative Arthritis. Harold L. Barnard.
12 Invagination of Meckel's Diverticulum. J. F. Dobson.
13 Notes of a Case of Extirpation of a Tumor of the Prostate for Retention of Urine. W. Prior Purvis.
14 A Case of Acute Ependymitis in an Infant. J. A. Coutts.
15 A Case of Dropsy, the Result of Inflammation of the Kidneys, Treated by Laparotomy. Henry P. Planer.

9. Infective Endocarditis.—Glynn's third lecture reviews some of the symptoms, such as excessive perspiration, epistaxis, diarrhea, vomiting, albuminuria, hematuria, and splenic enlargement. The physical signs are also noted. The difficulties of diagnosis are sometimes insuperable. In the absence of positive signs, the diagnosis depends on ability to exclude all affections other than acute endocarditis, likely to cause pyrexia, though this method may sometimes fail. There is a resemblance to pernicious anemia in some cases. Recovery is rare and no specific remedy has been found. The success with antistreptococcus serum is not what was expected.

10. Dietetics.—Two well-defined conditions of proper diet are given by Hutchison as: 1. That the food yields enough potential energy to supply the daily outgoings in the form of heat and work. 2. That it contains enough proteid to replace the daily and inevitable destruction of tissues. Somewhere between 2,500 and 3,500 calories will be required; probably 3,000 represent the requirements of the ordinary town dweller, and part of this must be supplied in the form of proteid. Whether this is obtained mainly from carbohydrates or fat depends largely on the digestive capacities of the individual and, to some extent, on his purse, as fats are more expensive than carbohydrates. As to the amount of proteid required to supply the waste, there is not full accord. The 120 grams recommended by Voit is larger than is considered necessary in many cases, but we do not know the minimum below which one can not go with safety. The tendency to overeat is responsible for much disease. A food, giving a maximum of volume with a minimum of nourishment would be a godsend to many overfed persons. The excess of the proteid diet is principally responsible for much kidney and uric acid diathesis. One principle we must bear in mind is the interdependence of organs. We can not cut down the diet to treat a diseased stomach or kidney at the expense of the general nutrition. Ordinarily abrupt changes in the diet are to be avoided. He says there are only three great groups of diseases in which one can reasonably anticipate that dietetic means will be potent for cure. They are: 1. Diseases of the organs of digestion; 2, diseases of metabolism, fever, obesity, malnutrition, diabetes and gout where there is a perversion of the usual methods of dealing with nutrition, and 3, diseases of the excretory organs, especially the kidneys. As regards dyspepsia, Hutchison remarks that the mechanical form of food is always of more importance than its chemical composition. The meals of the dyspeptic should be small and contain no insoluble ingredients. The stomach should be humored to pass on the food. In most cases of functional disorder he thinks it well to give the stomach a little wholesome neglect. Overeating may be a serious evil. In bowel troubles we should consider the mechanical condition of the food. One should select a diet in diarrhea that has as little unabsorbed residue as possible. With constipation the opposite should be the aim. In fevers, it is a question, Hutchison thinks, whether we have not gone too far in the reaction from starvation. In all forms the carbohydrates should enter freely into the diet. Obesity is a disorder in which it is easy to overestimate the effects of diet. The proteids are less likely to cause harm than the carbohydrates and fats. Restriction of drinking at meals prevents overeating. Alcoholic liquors are likely to do harm. In diabetics there is a pretty general uniformity as regards diet. In renal disease Hutchison would follow the common opinion that in acute nephritis, especially when blood is present in the urine, an exclusive milk diet gives the best results, but in chronic nephritis affairs are more complicated. We should keep up a vigorous heart. Meats should not be excluded, but foods which contain only the extracts of meats without its albuminous elements should be rigorously avoided. Restriction of fluids in cases of dropsy is not contraindicated, and he would have no hesitation in recommending the dry diet to such patients.

11. **Suppurative Arthritis.**—Barnard would advise that in cases of suppuration of the knee joint with a temperature ranging from 103 to 104 the condition should be treated by anterior and posterior incision, especially if the suppuration results from punctured wounds. If suppuration arises from autoinfection and is subacute, with a temperature of not more than 102, he would be inclined, taught by the cases he here reports, first to make lateral incision on either side of the patella and to wash out the joint thoroughly and drain it. The joint should be treated as though it were an aseptic case, for in autoinfection we have usually to deal with one micro-organism only, and that often a mild one. We should be careful that in casting out one micro-organism we do not admit others worse than the first. Should this partial drainage fail to bring the temperature down in a day or two the posterior pouches should be laid open and thoroughly drained.

Annales de Dermatologie et de Syph., Paris.

Last indexed page 742.

16 (IV, 2.) *Die l'ichthyose fetale dans ses rapports avec l'ichthyose vulgaire. J. Méneau.
17 *Recurring Erythem. Gensollen.—De l'érythème polymorphe récidivant.
18 *Blastomyces et blastomycose. Gastou.
19 Syringe for Thick Oils. Chatin.—Seringue sterilisable pour injections d'huiles très denses (lipiodol, iodipin, etc.)
20 (No. 3.) *L'eczéma considéré comme une réaction cutanée. L'eczéma suivant les ages. L. Brocq.
21 Lésions histologiques de l'épididymite blenorrhagique. C. Audry and Dalous.
22 Legal Responsibility of Employer for Syphilis Contracted in Glassblowing. L. Perrin.—Responsibilité civile d'un patron verrier, etc.
23 Un cas de pemphigus foliacé primitif. P. Meynet and N. Ribollet.
24 Essais de traitement de la syphilis par l'argent colloidal. Audry and Dalous. Two cases. Results comparatively negative.

16. **Relations Between Fetal and Ordinary Ichthyosis.**—Méneau regards both as links in one chain, different degrees of a single pathologic process. He appends a full bibliography.

17. **Recurring Polymorphous Erythema.**—Gensollen describes 5 and reviews 3 cases already published. The conditions with which it is most liable to be confounded are antipyrin erythema and herpetiform dermatitis. In case of an eruption in round, infiltrated patches, appearing abruptly with identical recurrences and persisting pigmentation, the patient ascribes the eruption to some preceding painful affection instead of to the antipyrin he took to combat it, the true source of the trouble. The pruritus in the affection described in the title is not so intense as in herpetiform dermatitis (Duhring), the attacks are briefer and the lesions are more in the form of a roundish elevation with a central depression. Blebs are accessory and inconstant.

18. **Blastomycetes.**—Gastou exhibited to the Société de Dermatologie specimens of blastomycetes sent by Dr. F. H. Montgomery of Chicago, derived from the lung of a man who had died with generalized blastomycosis. These parasites, Gastou mentions, have been discovered and described only by American writers to date. He queries whether the blastomycetes will share the fate of the coccidia, and suggests that the possibility of a secondary contamination proper to certain lesions or certain countries is not absolutely excluded. There can be no doubt, he adds, that yeasts might easily develop on wounds or ulcerations exposed to the air or defectively dressed. Yeast fungi exist in such numbers everywhere that the only wonder is that the phenomenon is not more frequent. It remains to be demonstrated, he concludes, which among these yeasts are or are not pathogenic or what conditions favor their becoming so.

20. **Eczema a Cutaneous Reaction.**—Brocq maintains that there is no such thing as eczema, but merely eczematous individuals. In a person of this category any one of a number of causes may induce the cutaneous reaction which we call eczema, while in other persons the same causes will never produce it. These causes may be sunshine, wind, light, dust, contact with certain articles of clothing, dyes, etc., intoxications, autointoxication, defective functioning of certain organs, lesions of organs, nervous impressions, worry or other emotions. The physician, therefore, should seek for the underlying cause. A change of environment may cure the most rebellious case. He has known country people cured by a trip to the city, as well as city people cured by going to the country. The diet and mode of life must be regulated in the first place. The patient must be "washed out," that is, put on a strict milk diet, with Vichy water and diuretics, supplemented by a large rectal injection every day or two. If milk can not be taken, he orders a vegetable and water diet. Freedom from worry and plenty of pure air are important; if possible, he sends the patient to the country or, better still, to the mountains. Under this régime the physician is liable to witness the most intractable eruptions disappear with relative rapidity, provided he is content with clean local non-irritating dressings, the parts protected from noxious influences, to enable the skin to repair its lesions with the least possible hindrances. Treatment on these principles will render the secondary exfoliating dermatoses much less frequent and much less severe.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

25 (No. 15.) *Ueber die Indikationen zur chirurgischen Behandlung der Cholelithiasis und Cholecystitis. W. Körte.
26 Tödliche Anämie durch Botriocephalus latus. W. Zinn (Berlin).
27 *Sensitive, Simple and Rapid Test for Sugar with Oxalate of Phenyl Hydrazin. E. Riegler (Jassy).—Eine empfindliche, etc. Zuckerprobe mit oxalsaurem Phenylhydrazin.
28 Movable Double Diaphragm for Roentgen Photography. O. Pasche (Berne).—Ueber eine neue Blendenvorrichtung in der Roentgentechnik.
29 Ein kasuistischer Beitrag zur Aetiologie der diffusen Sklerodermie. Heynacher.
30 Successful Laparotomy for Swallowed Knife, 1684. A. Rosenberg.—Historia des preussischen Messerschluckers.
31 Prophylaxis of Tuberculosis Contagion at Health Resorts.—M. Karger.—Der Schutz vor Lungenschwindsucht in Kurorten, etc.
32 (No. 16.) *Ueber die systematische antifebrile Behandlung des Unterleibs-Typhus mit Pyramidon. Valentini (Dantsic).

33 *Influence of Courses of Mineral Waters on Osmotic Tension of Blood.* J. Grossman (Bucharest).—Ueber den Einfluss von Trinkkuren mit Mineralwässern auf den osmotischen Druck des menschlichen Blutes.

34 *The Reflex Route of "Catching Cold" and of Temperature Irritations in General. O. Kohnstamm.—Der Reflexweg der [illegible] überhaupt.

35 *Ac[illegible]s. H. Schmidt.—Ueber [illegible] Collargol-Injektionen bei septischen Erkrankungen. (Commenced in No. 15.)

36 *Toxic Myolysis of Heart in Diphtheria. H. Eppinger (Graz).—Die toxische Myolyse des Herzens bei Diphtheritis. (Commenced in No. 15.)

37 *Ueber Antistreptokokkenserum. F. Meyer.

38 Veterinary Diseases in the Cameroon District. *Ziemann.*—Vorläufiger Bericht über das Vorkommen des Texasfiebers, Tsetsekrankheit, Thier-Malaria in Kamerun, etc.

25. **Indications for Surgical Treatment of Gallstones.**—Körte grows more conservative in his indications for operation, with riper experience, but more radical when surgical intervention is once decided on. Rapidly transient icterus with passage of stone is no indication for operation. But when the lithiasis imperils life, even when the attack subsides, there can be no question of permanent healing of the gall bladder in such cases. Severe and complicated cholelithiasis is accompanied by general depression, which may be the first sign of the infection of the gall bladder before icterus attracts attention to this organ. Protracted fever, persisting after an attack, especially if of the remittent type or accompanied by chills, is suspicious of pus formation and indicates intervention, as does also tenderness of the gall-bladder region. Nodules in the liver, with ascites, contraindicate operation, as they are due to carcinoma in an advanced stage, but sometimes inflammatory adhesions in the omentum simulate these nodules. An exploratory laparotomy is justifiable in case of doubt. Chronic empyema of the gall bladder, acute infectious empyema and signs of occlusion of the common bile duct are urgent indications for intervention. The prognosis is good so long as the stone formation is limited to the gall bladder and cystic duct and there are no evidences of intense inflammation. He prefers to take out the gall bladder in most cases, as this does away with the focus of infection. The great majority of stone patients who suffer only occasionally and are well in the intervals, belong in the hands of the physician until the attacks recur so often or are so severe that the patient himself longs for radical treatment or the physician deems that the proper moment for intervention has arrived. The mere existence of stone does not demand intervention. The indications depend on the kind and degree of the resulting inflammation.

27. **Improved Test for Sugar.**—Riegler's test reveals sugar, even in a proportion of merely .05 per cent., and requires only three minutes. The presence of albumin does not interfere with the results. Twenty drops or 1 c.c. of the urine or other solution of sugar is placed in an ordinary rather large test glass, with as much phenyl hydrazin oxalate as can be taken up on the tip of a knife, with 10 c.c. of water. The mixture is then boiled and shaken until all is dissolved. Then 10 c.c. of a 10 per cent. solution of caustic potash is added, the glass stoppered and well shaken, when the fluid turns a handsome purple in less than a minute if it contains sugar. The oxalate can be made by heating 20 gm. of phenyl hydrazin hydrochlorate in 300 c.c. water until dissolved and then adding 10 gm. of ammonium oxalate dissolved in 100 c.c. of water. The crystals are collected on a filter as soon as they are cool and, after rinsing and drying, are ready for use and keep indefinitely.

32. **Success of Pyramidon in Typhoid.**—Valentini proclaims that better results can be accomplished with the continuous administration of pyramidon than with the Brandt baths. The temperature is reduced entirely or very nearly to normal in the course of twenty-four hours and does not rise again. The pulse slows down and the delirium completely subsides. The pyramidon is given in water, .2 gm. in mild and .3 to .4 gm. in the severer cases, the dose repeated every two hours during the entire course of the disease. No inconveniences of any kind were observed, even when the patients took this amount regularly every two hours night and day for four or five weeks. The effect of the pyramidon is so remarkable, he states, that it is not advisable to commence it until the diagnosis of typhoid is positive, as otherwise the symptoms are so masked that the physician is at a loss. The end of the first week is soon enough. The duration of the disease does not seem to be shortened but the patients are able to wait on themselves, and the danger of contagion of others is much reduced, as the patients can use the urinals and bed pans without soiling the linen. Out of 19 typhoid patients treated in this way, 12 were very severe cases, and 2 died, one with pyemia and pneumonia, another from heart failure in the third week. The pulse in the latter case had been continuously bad and the autopsy showed brown atrophy of the heart and enlarged spleen, while the ulcerations were healing.

34. **Reflex Route of Temperature Irritations.**—Kohnstamm is subject to catarrh of the upper air passages, invariably preceded by some exposure to cold, and then assuming the infectious character, contagious for those around him. He has found that careful protection from chilling, especially at night, pyramidon in several doses to a total of .3 gm. and diversion of the mind will prevent and cure the affection. Psychic diversion, he finds, not only diminishes the cutaneous irritation but also the mucous secretion in the most striking manner. He has been studying the reflex routes for these effects in the upper air passages after chilling some part of the body, and gives diagrams to explain his assumption that the temperature and pain fibers run in Gower's tract on the crossed side, and that the "cold" nerve track is in closer relations with the respiration center than the "heat" nerve track. This close connection is the cause of the "chilling reflex." When the microbian factor is added, catarrh is the result. From the respiration center the centers governing the muscles of expiration are irritated to coughing and sneezing, and those governing vasodilation in the vago-trigeminal domain are irritated to congestion. This "chilling reflex" is normally a stimulant for the vegetative processes, and is useful in this respect in "fresh air cures" and light baths.

35. **Action of Intravenous Collargol Injections in Septic Affections.**—Since Credé first suggested, in 1896, the use of soluble silver he has used it in intravenous injection in numerous cases of septic affections, which Schmidt reviews in this article, as also the experiences published by others. A number of cases personally observed are described in detail as typical instances of the benefit derived from the measure. Credé does not think it necessary to call on a catalytic or other action, as he thinks the bactericidal power of silver is sufficient alone to explain the results observed. Beyer has established that a proportion of 1/80,000 in serum nutrient media has an inhibiting effect on bacterial proliferation. All in all, Schmidt concludes, six years of experience have confirmed the fact that we have in collargol an extraordinarily powerful aid for fighting the most diverse infectious conditions, which has won for itself a prominent place in therapeutics, and is free from the limitations of specific curative serums as it is convenient, inexpensive and can be used at any time and in any place in any septic affection.

36. **Toxic Myolysis of the Heart in Diphtheria.**—Eppinger is engaged on a large work descriptive of the pathologic anatomy of fatal diphtheria. In this preliminary report he states that his attention was attracted to the frequency of death from paralysis of the heart after diphtheria, and that he has found that the diphtheria toxin causes a disintegration and dissolving of the heart muscle fibers. He describes the process as "myolysis cordis toxica." He found it pronounced in all the 18 cases he has examined, including one in which serum treatment had not been instituted. He has previously established that in certain disturbances of the hearing subsequent to diphtheria the trouble consists in focal edematous softening of the nerve fibers of the acoustic nerve, and the lesions noted in the heart correspond with this conception of the effects of the toxin.

37. **Antistreptococcus Serum.**—Meyer has been testing Aronson's new serum. It proved very effective in 5 out of 18 cases, but seemed to have little if any influence on the others. It displayed remarkable power in experiments on animals.

Its absolute harmlessness and its efficacy in a certain proportion of clinical cases justify its application on a wide scale.

Monatsschrift f. Geb. und Gyn., Berlin.

Last indexed XXXIX, page 1621.

39 (XVII, 1.) Question of Operating on Female Internal Organs. F. Frank (Cologne).—Beiträge zur Frage des Operirens an inneren Organen der Bauchhohle beim Weibe.
40 *Pseudohermaphroditismus und sekundäre Geschlechtscharactere: ferner drei neue Beobachtungen von Pseudohermaphroditismus beim Menschen. A. Hengge (Greifswald).
41 *Ueber den Schatz'schen Metranoikter. B. Daniel (Hamburg).
42 *Ueber Chorea gravidarum. H. Hirschl (Prague).
43 *Obituary of Max Sänger.
44 (No. 2.) *Ueber einen Fall von Hydramnion. W. Zangemeister (Leipsic).
45 *Serial Sections of Caput Succedaneum. I. Lönnberg (Upsala).—Eine Serie Gefrierdurchschnitte durch eine Kopfgeschwulst.
46 *Changes in Uterus in Acute Infectious Diseases. C. Stravoskiadis (Vienna).—Ueber die Veränderungen des Uterus bei akuten Infektionskrankheiten. (Commenced in No. 1.)
47 Die Hysterektomie in der Behandlung der puerperalen Infektion und die Peritonitis im Puerperium. A. Sippel (Frankfort-a.-M.)
48 *Study of Origin of Uterine Cancer. A. Stein (Posen).—Beiträge zur Kenntnis der Entstehung des Gebärmutterkrebses.
49 Fall von hydronephrotischer Wanderniere. R. U. Boerma (Dresden).
50 *Zur Eklampsiestatistik. Hans Schroeder (Bonn).
51 (No. 3.) *Ein klinischer Beitrag zur Lehre vom Hydramnios. O. Fellner (Vienna).
52 Ueber Mola haematomatosa tubarica. Ersillio Ferroni (Pavia).
53 *Management of Contracted Pelvis. A. v. Magnus (Königsberg).—Zur Therapie des engen Beckens. (Commenced in No. 2.)
54 *Complication of Delivery by Extensive Varices. M. Dützmann (Greifswald).—Geburtskomplikationen bei ausgedehnter Varicenbildung.
55 Ueber die chirurgische Behandlung der Sactosalpinx purulenta. Lichtenauer (Stettin).
56 (No. 4.) Ueber eine seltene, vom Typus abweichende Form des Chorionepithelioms mit ungewohnlichem Verlaufe. C. Fleischmann (Vienna).
57 *Beitrag zur operativen Behandlung der Myome in der Gravidität. Frank (Olmutz).
58 Neoplasms Originating in Round Ligament. O. Nebesky (Innsbruck).—Zur Casuistik der vom Ligamentum rotundum uteri ausgehenden Neubildungen.
59 Case of Coincidence of Various Genital Tumors. O. Frankl (Vienna).—Ein Fall von Cumulierung verschiedenartiger Genitaltumoren.
60 *Anatomy of Lymph Routes in Ovary. O. Polano.—Beiträge zur Anatomie der Lymphbahnen im menschlichen Eierstock. (Commenced in No. 3.)
61 *Zur Frage uber die operative Behandlung der Uterusruptur. N. Kolomenkin (Moscow).
62 Zur Anatomie des Plexus fundamentalis uteri beim Weibe und bei gewissen Tieren. S. Pissemski (Kiev).

40. Pseudohermaphroditism and Secondary Sexual Characteristics.—Hengge describes two "sisters," both of whom possessed the bodily and psychic female characteristics except that testicles were present in the large labia. On account of local sensitiveness and general disturbances the testicles were removed from the unmarried "sister." A study of the literature concerning the etiology of the malformation and the development of sex characteristics, as well as a consideration of therapy, lead to these conclusions: 1. Numerous deviations from the usual rule of the dependence of sexual characteristics on the sexual glands are found. 2. The earlier any change occurs in the sexual glands the greater are the changes in the secondary sex characteristics. 3. Congenital disturbances in the sexual glands and secondary characteristics are generally due to mechanical causes. Sometimes trophic or nervous influences may be assumed. 4. In the development of dysmenorrhea and psychic female characteristics in the case of male hermaphrodites, education and example are of great influence. 5. Operative removal of sexual glands is indicated only when they cause much pain and their functionating is impossible.

41. Schatz's Uterine Dilator.—Since all of the usual methods of dilating the uterus, namely, the use of the metrotome, the branched and cylindrical dilators, the tamponade and the swelling tents, have frequently proved imperfect and unsatisfactory, Daniel is surprised that Schatz's metranoikter, first described in 1881, has received so little attention. It consists of two nickel-plated steel semi-cylinders united at one end by a spring of the diameter of an ordinary vaginal speculum. When the half cylinders are held in contact with their flat faces together they form a rod or sound 5.5 cm. long and about 5 mm. in diameter. The dilator is closed and introduced into the uterus by a holder or forceps. The application is easy and requires no anesthetic. Its action is prompt and attended with little pain. It has been used in Prochownick's clinic for the last three years for dilating the uterus previous to curettement and for diagnosis in cases of intrauterine growths. It may also be of value in the induction of labor and some other obstetrical operations.

42. Chorea of Pregnancy.—Hirschl considers the great rarity of this disease, its causes and treatment, and describes a case of severe chorea which terminated in complete recovery after spontaneous premature labor. In regard to treatment *he defends the conclusion of Knapp that in milder cases one should try dietetic and medicinal measures, but that some cases furnish us strict indications for abortion and premature labor.*

43. Obituary of Max Saenger.—Saenger was one of the founders of the "Monatsschrift." Very sympathetic accounts of his life and work are written by his coworkers, Martin and Rosthorn. Then follow the autobiographical and three com- and autobiblio- graphical notes left by this great gynecologist.

44. Hydramnion. *Origin of Liquor Amnii.*—A careful study of the maternal blood and of the liquor amnii in a case of hydramnion in the Leipsic clinic was made for t purpose of studying the origin of the liquor amnii and its increase. A disturbance of the fetal circulation was hologic present in this case, caused by knots in the cord. The ubt of the fetal circulation could not have increased the a. of liquor amnii by increasing the fetal kidney secretion. urinary part of the liquor amnii was diminished, as shown examination. The blood of the mother showed an increa in water and urinary products. Zangemeister concludes tha maternal and fetal blood and liquor amnii are, so far as the crystalloid substances are concerned, a single fluid separated by permeable membranes. *Hence the question of the maternal or fetal origin of the permeable part of the liquor amnii has no significance, as also the presence of urinary products in the liquor amnii has no bearing on its origin from the kidneys.*

45. Structure of Caput Succedaneum.—In numerous sections on new-born children Lönnberg has found that the common description of the caput succedaneum as a subcutaneous transudate is incorrect. He describes and pictures seven serial sections through a large tumor of that kind which show that it is a serohemorrhagic transudation in all layers of the skull covering, including the skin, but that the chief part is between the galea and the periosteum.

46. Uterine Disturbances Due to Infectious Diseases.—A review of the literature shows that exact observations and examinations to determine the effect of acute infectious disease on both the pregnant and the non-pregnant uterus are rare. To fill this lack Stravoskiadis examined, in Weichselbaum's laboratory, 24 cases, including pneumonia, typhoid fever, pyemia, etc. Macroscopic, microscopic and bacteriologic examinations were made. The following conclusions were reached: 1. An acute endometritis which is often hemorrhagic is of frequent occurrence in acute infectious disease. 2. This inflammation is caused by the specific bacteria that cause the disease or a complication. 3. Particularly favorable conditions are present during pregnancy and the puerperium for the increase of the bacteria which reach the uterus through the blood current. 4. Abortion or premature labor is frequently due to endometritis of hematogenous origin.

48. Origin of Uterine Cancer.—Stein reports two rare or unique cases, one of a combination of uterine tuberculosis and cancer and the other of uterine cancer with displacement of mucous membrane within the musculature. He discusses the possible etiologic relation of these conditions to cancer.

50. Eclampsia Statistics.—Schroeder calls attention to the unsatisfactory condition and incompleteness of the eclampsia statistics which give a false picture of the relation between albuminuria and eclampsia. For the purpose of securing more complete data a new scheme of urine examination has been

with coexisting cardiac defect. The diverticula do not cause symptoms so long as there is no inflammation in them. In his own case an old inguinal hernia in a robust man of 71 suddenly became uncontrollable and caused severe pains. All attempts to reduce it were fruitless and a perforation was found near the sigmoid flexure. It was in the middle of a patch of induration the size of a dollar in the intestinal wall and surrounded by evidences of suppurative peritonitis. The hard patch was assumed to be a carcinoma, and the portion of intestine involved was resected and the stumps united by lateral anastomosis. The results at first were good, but the patient succumbed fifteen days later, the heart found much degenerated. The indurated patch that had been resected proved to be merely an infiltration of the subserous adipose tissue; the perforation had occurred in a long narrow diverticulum passing through it. Stierlin thinks that these acquired diverticula would be found more frequently if sought for. Graser found incipient diverticula in 10 out of 38 cases in which the flexure was examined.

65. **Leiter's Apparatus for Local Heat or Cold.**—The apparatus is a sheet of zinc on which a tube is coiled back and forth and soldered, allowing a constant flow of water through it.

66. **Preventive Surgery.**—This address was delivered by Lanz on assuming the chair of surgery at Amsterdam. He asserts that internal medicine has not yet learned to profit by surgery to the fullest possible extent. Disturbances due to mechanical causes require mechanical removal of the cause, active intervention, which the surgeon can now proffer with confidence, as preventive surgery has ripened under the sun of anesthesia and asepsis. He believes in operating every hernia as a prophylactic measure. He noted abnormally large inguinal rings in 140 out of 750 recruits examined, all candidates for hernia later. In regard to appendicitis, he remarks that the first day the prognosis is certain, afterward it is as variable as the disease itself. He operates on the first day whenever possible, especially on children, and the results confirm him in advocating this as a routine measure in all cases of appendicitis, not waiting for further symptoms after diagnosis. He describes a typical case, the child of a physician, taken suddenly with abdominal pains and vomiting. He quieted down under opium and slept tranquilly, but the surgeon was able to palpate a swollen, tender appendix, and it was removed at once and found on the point of gangrene. Lanz believes that certain families have a tendency to appendicitis. He recently operated on three brothers or sisters on one day, all with appendicitis and another sister had passed through a similar experience. Internal medicine must not be jealous of her younger sister, but recognize her as an invaluable ally. The more powerful the ally, the better the results accomplished.

67. **Treatment of Puerperal Infection.**—From his personal observation v. Herff is convinced that the results of causal therapy are not always certain, and treatment is reduced to combating symptoms in most cases. He considers absolute immobilization of the patient very important to favor healing, if necessary using codein or morphin. Involution of the uterus should be promoted in every possible way, and the strength should be kept up by appetizing forced feeding, avoiding alcohol. The heart should be stimulated with small doses of strychnin, which he finds more effective than caffein. The fever requires no treatment unless very prolonged and interfering with sleep. He rejects local treatment. Intrauterine injections might be tried at the onset, but if they fail to benefit they should be suspended early. The curette should not be used at all.

68. **Rectal Feeding.**—Deucher advocates more general use of saline injections, which answer the purpose of transient rectal feeding in cases of inoperable carcinoma of the stomach or esophagus. The patients suffer from thirst rather than hunger, and absorption from the intestines is poor. Saline injections are also useful in cases of heart collapse or diarrhea and also in hyperchlorhydria and atony of the stomach, and occasionally in uncontrollable vomiting. They are useful after abdominal operations as they do not induce reflex phenomena. Actual feeding by the rectum, however, is of especial value in case of recent gastric ulcer or corrosion from caustics. When more substantial alimentation is required, eggs in a saline solution or a solution of cane or grape sugar will be found very useful. The sugar is almost completely absorbed and so rapidly that it does not have time to ferment.

69. **New Treatment of Gallstones—Chologen.**—Glaser explains cholelithiasis as essentially a nervous affection, not primarily an infection. The primary factor is a functional disturbance in the nerves of the liver governing secretion; secondarily, occur excretion of cholestearin and infection of the bile; thirdly, excretion of calcium bilirubinate, and fourthly, the formation and impaction of a stone in the neck of the gall bladder and development of local hyperesthesia. Treatment should combat all these factors. Glaser thinks that he has accomplished this by a combination of mercury with aromatic vegetable substances out of the laxative and bile-stimulating group (podophyllin) and the colic-soothing roots and oils (melissa, camphor and caraway). He uses three combinations, which he calls "chologen Nos. 1, 2 and 3." He has thus treated 73 women and 27 men; 78 per cent. have been completely cured; 16 per cent. improved, and 6 per cent. showed no appreciable benefit. Recurring cholecystitis was the trouble in 33 women and 6 men; 29 women and 4 men were cured, and the others improved, except one woman. Ten women and 3 men suffered from acute occlusion of the common bile duct, all were cured but one woman; from chronic occlusion of the common bile duct, 25 women and 17 men, of whom 19 women and 14 men were cured and the others improved except 2 men. The 78 per cent. whom he calls cured have remained well, with no symptoms of recurrence, are able to work and eat without restrictions. They include a number of very severe cases. There are no contraindications to this treatment, according to his experience. Old and young, cardiac patients and pregnant women took the chologen without inconveniences of any kind. Only in case of catarrh of the large intestine the chologen sometimes induced abdominal pains, but the catarrh was not aggravated and the curative effect of the treatment was not diminished. Even in dubious cases the chologen may prove useful, as he has established its efficacy also in cases of nervous stomach cramps. It will never fail if correctly administered, unless in case of existing empyema of the gall bladder, extensive inflammatory adhesions or malignant neoplasms. He considers the appearance of icterus a favorable sign, as it indicates that the stone has passed into the common bile duct, and this class of cases responds the best to chologen treatment. He relates typical examples, among them the case of a man of 49 who had suffered for ten years from gallstones. The attacks were frequent and extremely painful, with pruritus and icterus, constipation or diarrhea, the urine red and dark colored, the patient extremely feeble. Two tender points were found, one over the gall bladder and the other typical of chronic occlusion of the common bile duct, about 3 finger-breadths above and to the right of the umbilicus. Four weeks after the chologen treatment was instituted the patient returned strong and apparently well and has been healthy since then (July, 1901). The preparation of the chologen tablets has been entrusted to the laboratory of H. Rosenberg, Achenbachstrasse 2, Berlin W. They can be obtained only on a physician's prescription. Besides this mercurial chologen treatment Glaser insists on relief from nervous strain, out-of-door exercise, the diet regulated but abundant, and meat and vegetables allowed. Warm saline baths are valuable adjuvants. Some of the disturbances may be caused by adhesions, and these can be remedied by wearing a supporting bandage or reclining on a certain side. When an attack threatens he applies a flannel cloth moistened with equal parts poppy-seed oil and chloroform. The total amount of mercury taken in the three to four months' course of chologen treatment is only .5 to 1 gm. In a second communication in No. 6 he states that his second series of 100 cases has proved equally successful.

continued as a three-hourly medication. On this day she was taken to the operating room and her uterus emptied by curettage of a large amount of decomposing placental tissue. This was done without an anesthetic. The interior of the bladder was at the same time cursorily examined with a cystoscope and found to be both normal in appearance and empty. During this day the bowels moved seven times, and the stool contained blood. The patient vomited a great deal and did not retain much nourishment. The diuretin seemed to be the cause of the gastric irritation, and was discontinued after 12 hours' trial. The total amount of urine obtained by the many catheterizations did not exceed thirty drops. The hot-air baths were continued, but no more salt solution was injected into the veins. It was considered that in the absence of results from the injection of 8 quarts in 24 hours nothing could be expected from further repetitions of the dose. The patient slept fairly well.

FIFTH DAY OF SUPPRESSION.

March 3.—Temperature remained below 99.6 F., pulse 74 to 80, respiration 20. Calomel was continued in one-fourth grain doses every three hours. The bowels moved 7 times. Steam baths, for 25 minutes, were continued. Patient continues to vomit. A sum total of ten drops of urine was obtained by catheterization during the 24 hours. The stool of the patient was examined for urea and found to contain 0.6 per cent.

SIXTH DAY OF SUPPRESSION.

March 4.—Temperature 98.2 to 98.8 F., pulse 70 to 84, respiration 20. Patient slept a great deal. Bowels did not move so freely. An attempt was made to place patient in cabinet bath, but she was too weak to sit up and the steam baths were therefore continued. The patient felt well while in bed. She complained of no headache, no ocular symptoms; in fact, no pains in any region. The calomel was continued. Ten drops of urine are recorded for this period of 24 hours. The character of this urine remained the same. The stool of the patient was again examined for urea and found to contain 0.7 per cent. The uterus was irrigated because of a continuance of a discharge from the external os. On this date patient was taken to operating room, and a second examination of bladder made. The bladder was normal in color, not inflamed and empty. No water could be seen to issue from the ureters and certainly none collected in the bladder during the half hour that the examination was continued with the bladder distended by air. There was no evidence of a calculus in the orifice of either ureter and no bulging at this site. On the contrary, the right ureter was widely open. During each day of the disease the kidneys were both thoroughly and satisfactorily palpated with a view to detecting a developing hydronephrosis from simultaneous obstruction of the ureters by calculi. The kidneys could be felt to be somewhat enlarged from the start, but there seemed to be no progressive increase in their size.

SEVENTH DAY OF SUPPRESSION.

March 5.—Temperature remained 98.6 F., pulse 72 to 90, respiration 20. General condition shows marked failure in strength. The patient slept most of the time and was aroused with difficulty. Citrate of magnesia was given; strontium bromid was given in 10-grain doses every four hours as a diuretic. Calomel was continued. Bowels moved eleven times. Urine was obtained four times by catheter; on two occasions one dram was obtained, on another one-half dram, on another four drops. This urine was examined carefully. The reaction was acid, color amber and cloudy, albumin was present in considerable amount, sugar was absent. The urea percentage was 1.4. On microscopic examination no casts were found, but three varieties of cells were present—white blood cells, bladder epithelial cells and round kidney cells. The white blood and the bladder epithelial cells presented the usual appearance, but the kidney cells presented a most striking example of fatty degeneration. This condition of the kidney cells had been noted in the urine of the preceding days, but to so slight a degree that it was not given much thought. The four specimens obtained at different times on this seventh day of the suppression demonstrated a very rapidly-increasing number of these fatty cells until the evening specimens presented a most striking picture.

The rapidly increasing numbers of degenerated kidney cells were considered to indicate that the kidney parenchyma was undergoing rapid degenerative changes by reason of the prolonged stasis of blood in its vessels. It was taken as an index of the pathologic changes taking place in the kidney and as a finger-board pointing out the correct line of treatment.

The condition of this patient had been explained from the start, in the writer's mind, on a basis of vasomotor disturbance whereby a stasis of blood, probably under great tension, had occurred in both kidneys. Blood was not flowing through the glomeruli, therefore the secretion of urine was in abeyance. The medication employed was directed to a re-establishment of this circulation and to an elimination of as much urea as possible by way of the skin, bowels and lungs. A continuance of this medication and general line of treatment was believed to be justifiable so long as the condition of the patient remained fairly good. Nevertheless, the operating-room force was held in readiness during this entire time for such operative treatment as might be demanded.

The definite evidence of rapid degenerative changes in the parenchyma of the kidney seemed to the writer to present a positive indication for such operative intervention and the patient was accordingly prepared for this treatment.

On March 6, and at the completion of her eighth day of suppression, the patient was taken to the operating room. Chloroform was used as the anesthetic. The right kidney was exposed by an oblique incision in the loin through all structures (the possibility of extension of the incision for the exploration of the ureters made a muscle-splitting operation undesirable). This kidney was certainly one-half larger, if not double the size of a normal kidney. Its external surface presented a mottled, purplish-blue appearance which at once suggested the appearance of the face of a baby whose head had just been born with the cord compressed. The kidney was lifted from its bed and the body of the kidney, the pelvis and the ureter thoroughly palpated. Nothing abnormal could be found and the pelvis certainly was not dilated. A hollow needle was thrust into the pelvis through the cortex for the double purpose of probing for stone and drawing off urine from a dilated pelvis. This investigation gave negative results.

The opinion already expressed regarding blood stasis seemed confirmed and the capsule of the kidney was split from end to end and totally removed. When an incision was made in the capsule its edges retracted and the cortex bulged through the incision as if under great tension, this in a manner entirely analogous to that seen in brain operations when the dura is opened. Very free hemorrhage followed the separation of the capsule from the kidney, but this membrane was nowhere firmly attached to the cortex by fibrous wedges projected inward. The capsule was of about normal thickness and was stripped off easily. The kidney parenchyma was of a yellowish-gray appearance after the blood-letting of decapsulation and was so brittle that the slightest touch of an instrument seemed to lacerate it. At one time my assistant changed the position of a very blunt abdominal retractor, and in so doing struck the convexity of the kidney. A lacerated wound three-fourths of an inch long and one-half inch deep resulted. The naked eye appearance of the cortex was that of marked fatty degeneration. The capsule of the kidney was entirely excised, the kidney dropped back into its bed, gauze drainage was inserted and the external wound closed. A provisional stitch was inserted for the purpose of completing the primary closure of the wound after the removal of the drainage 24 hours later.

Exactly the same procedure was immediately applied to the left kidney. This organ presented precisely the same anatomic conditions; the pelvis was likewise found to be free and the capsule was removed. The time consumed in the double operation was 45 minutes. The patient stood the operation perfectly well, her pulse did not exceed 100, and she was put to bed in a most satisfactory condition. At the time of her return to bed the pulse was 70 and the respirations 20 per minute. There was no vomiting from the anesthetic.

One hour after operation the patient expressed a desire to urinate and two ounces of intensely bloody urine were obtained by catheter. This urine was neutral in reaction, albumin was abundant in a filtered and centrifuged specimen and the urea percentage was 1.4. Microscopically red blood cells were present in large numbers; the same round cells presenting in advanced stage of fatty degeneration were found in abundance, but no casts.

The temperature remained normal throughout the remainder of the day, the pulse varied from 72 to 80, the respirations from 24 to 28.

At 6 p. m. (six hours after operation) 2¼ ounces of urine possessing the same naked eye, chemical and microscopic characteristics were voided by the patient.

At 9 p. m. 1¾ ounces of urine of similar nature were voided.

The patient was given water per mouth in six hours after operation.

At 1:30 a. m. 2 ounces and at 5:30 a. m. 4¼ ounces were passed. Three ounces at 8:30 a. m., and 4 ounces at 11:40 a. m., gave a sum total of 21 ounces of urine passed in the first twenty-four hours after operation.

The urine continued to be intensely bloody, the reaction became acid at 1:30 a. m., the specific gravity was 1,009, and the urea percentage had diminished to 1 in the morning urine. The fatty cells persisted to the end of the twenty-four hours. An 8-ounce bottle containing the first urine passed showed a red deposit ¼ inch thick after settling for a few hours. The patient was rather drowsy during the day, had some abdominal pain, and vomited once.

The second twenty-four hours after operation, the temperature, respiration and pulse remained normal. The urine was passed in from 3 to 10-ounce quantities and aggregated 48 ounces. The blood rapidly disappeared and the urine became amber color by the end of this period. The reaction continued to be acid. The specific gravity did not vary from 1,008. The urea percentage varied from .85 to 1.5. Albumin was present. Red blood cells were always present microscopically. The fatty cells had disappeared by the end of the period. No casts were found in any specimen.

The patient rested well, took liquid food with much indifference, and vomited bile once or twice. She was delirious for two hours during the night, but slept well with this exception. The gauze drainage was removed and the provisional sutures tied.

The third twenty-four hours after operation, temperature, respiration and pulse remained normal. The amount of urine aggregated 89 ounces. The character was about the same as that during the second 24 hours except that it became bloody again for about six hours, then returned to amber. The patient rested well. The diet consisted of toast, egg, cocoa, oyster broth, ice cream, and orange albumin water. There was great prostration, but patient was cheerful. The bowels moved well.

The fourth twenty-four hours, temperature, respiration and pulse normal. Total amount of urine 56 ounces. Urine clear; very few red cells; no casts; trace of albumin; specific gravity 1,009; reaction acid; no sugar.

The fifth twenty-four hours, temperature, respiration and pulse normal. Total amount of urine 77 ounces. General condition good. Quality of urine the same as during the fourth day. Appetite vacillating. Some delirium at night, yet patient slept well. Patient received eggnog and strychnin sulphate grs. 1/60 as continuous tonic stimulation.

The sixth twenty-four hours, temperature and respiration normal. Pulse became elevated to 100. Total amount of urine 64 ounces. Urine amber color and cloudy; reaction acid; specific gravity 1,009; trace of albumin; no sugar. Microscopically amorphous urates, a very few red blood cells and no casts were found. Urea percentage 1.4.

The seventh twenty-four hours, temperature 98.4 to 99.2, pulse 90 to 120 and bounding, respiration 20 to 26. Total amount of urine passed 47 ounces. Quality of urine same as on sixth day. Patient felt very weak and looked very pale, but said that she had no pain and felt very well. Appetite failed somewhat.

The eighth twenty-four hours, temperature, respiration and pulse normal. Total urine 52 ounces. Quality same as on sixth day.

The ninth twenty-four hours, temperature 90 to 102, pulse 108 to 120 and bounding. Respiration 24. Total urine 45 ounces. Quality of urine same, except that it is now perfectly clear. No explanation could be found for the rise in temperature and pulse rate. One physician who saw the patient at this time stated that the pulse was that of a patient just previous to puerperal eclampsia and advised the use of a veratrum viride. This was not given, however.

The tenth day, temperature 99 to 101, pulse 80 to 100, respiration 24. Total amount of urine 44 ounces. General strength improved, patient feels better and asked to get up. Quality of urine the same as on sixth day.

During the eleventh day the total amount of urine was 47 ounces; during the twelfth day 52 ounces; during the thirteenth day 48 ounces; during the fourteenth day 78 ounces; during the fifteenth day 62 ounces; during the sixteenth day 65 ounces; during the seventeenth day 47 ounces; during the eighteenth day 64 ounces; during the nineteenth day 80 ounces. On this date the patient returned to her home, and the husband has reported that the total amount of urine has averaged from four to four and one-half pints per day for every day since March 25.

The temperature returned to normal after the tenth day and remained so. The strength of the patient improved steadily, and she sat up on the sixteenth day after operation. The appetite improved rapidly until it became normal. The urine became normal on the seventeenth day.

It is believed that this patient suffered from a vasomotor suppression of urine. There are two factors which may have acted in a causative relationship to the condition. Either the ergot which was contained in the emmenagogue caused a strong and persistent vaso-constriction, or a strong reflex was communicated to the kidney at the time of the destruction of the ovum or by the uterine irrigation. Neither of these could be called an overpowering reflex, and it is certainly true that such a result would be most unusual, yet at the same time we must take into consideration the fact that the susceptibility of the nervous system to irritation and to reflex, particularly in women, is a most variable quantity. The patient was not exposed to conditions which would cause an acute nephritis, nor did she present the slightest symptom of this disease at any time. She was perfectly well up to the time of the destruction of the ovum. The temperature which she presented at the time of Dr. Perry's first visit is not believed to have been the result of septic infection, since it disappeared after one flushing of the uterus, and the material found in the uterus at the time of curettage did not seem to be infected. It is, of course, possible that there was some absorption of decomposition products into the general circulation, yet in the absence of any disturbance of the temperature and pulse rate it is difficult to believe that these products were very poisonous.

GENERAL CONSIDERATIONS.

The writer has been impressed on more than one occasion by the fact that our ready reference text-books of surgery contain little or no mention of the subject of suppression of urine. The condition is given a brief mention as a symptom, in connection with certain surgical diseases of the kidney and ureter, but is nowhere discussed in full, in so far as he knows, as a definite condition entitled to elaboration from the viewpoints of etiology, diagnosis and treatment. The literature on this subject, even though meager, is valuable and should be collected into such available form as will give a definite classification and a clear exposition of the subject. It has been the unfortunate experience of the writer to encounter this condition in a variety of forms; indeed, every surgeon has his quota of deaths after operation from suppression of urine and every surgeon knows the anxiety that is felt during the hours of its possibility and of its endurance.

It has been stated that suppression of urine is merely a symptom and not a disease. It is certainly true that suppression of urine may be but a single symptom in the picture of a given disease, e. g., cancer of the uterus with involvement of the ureters, but it is likewise true that in the majority of cases which are presented to the surgeon the suppression of urine is the one condition which imperatively demands treatment, and the one condition which is going to kill the patient unless relieved. Furthermore, each case of suppression of urine must be accurately and painstakingly studied from the viewpoints of etiology, pathology, symptoms, diagnosis and treatment, and it requires but slight reflection to see that the investigation and the management of these cases present unusual difficulties.

Such, it seems to the author, are the claims of this subject to a place among surgical conditions.

The present paper does not present for your consideration a solution to the problems of suspended kidney function, nor does it furnish a full presentation of the subject. The case, which is recorded above, is offered as a contribution to the meager literature on this subject, while the appended general discussion is presented in the purely suggestive light of personal impression gained from clinical experience and from some reading.

DEFINITION.

Suppression of urine is commonly defined as a condition in which the excretion of urine from the tubules of the kidney is entirely suspended or in which no urine is transmitted to the bladder. This definition is made to cover two distinct conditions and is believed by the author to be open to criticism. It would seem more accurate to omit the latter clause and say that suppression of urine is a condition in which the excretion of urine from the parenchyma of the kidney is suspended. When one or both ureters are mechanically obstructed the parenchyma of the kidney continues to perform its functions until a quantity of urine varying from a few ounces to one gallon has been secreted and until the pressure has become sufficiently great to arrest secretory pressure. When the urethra is mechanically obstructed the same accumulation of urine occurs behind the obstruction and the same result may follow in the kidney. Yet an accumulation of urine behind an urethral obstruction is called retention of urine, that behind an ureteral obstruction a suppression of urine, and the two are carefully differentiated. To my mind they are in reality one and the same lesion, except for the location in the tract of the obstruction, in the seriousness of the condition and in the accessibility of the lesion. The one may be diagnosticated and relieved by urethral, the other by ureteral examination and catheterization. Furthermore, the correct surgical treatment in each case is directed to the seat of mechanical obstruction with the one purpose of liberating the pent-up kidney secretions and of preventing or relieving serious secondary lesions in the kidneys.

In suppression of urine, as defined, the secreting mechanism itself is at fault; the lesion is primary in the kidney, and no urine is separated from the blood. The treatment of the condition must be based on entirely different grounds, and the lesion must be studied from the physiologic side.

We have, then, two distinct conditions, the one mechanical and always surgical, the other physiologic and sometimes surgical, and each worthy of careful study from the viewpoint of etiology and pathology. An appropriate division of that condition in which no urine is discharged from the body would seem to be: 1. Vesical and urethral retention or obstruction of urine. 2. Ureteral retention or obstruction of urine. 3. Suppression of urine.

It is believed by the writer that the above modifications in the definition of suppression of urine or anuria should be made. Yet the present discussion of the condition will be pursued according to the usual definition and a division of the subject will be made into an obstructive and non-obstructive form, each of which ma be elaborated under the heading of etiology.

ETIOLOGY.

The condition presented to the physician is one o "no urine," and it becomes necessary for him to seek th cause of this condition. The following table is offere as a concise statement of the causes of suppression o urine.

I. Obstructive suppression of urine may result from:

- *A.* A calculus, a blood clot or a plug of pus in the ureter. This may cause complete obstruction.
  - (*a*) In the ureter of the only existing kidney.
  - (*b*) In a single fused ureter from the two kidneys or from a horseshoe kidney.
  - (*c*) In the ureter of the only functionating kidney, the other kidney having been previously destroyed by calculous obstruction, tuberculosis, nephrolithiasis, suppuration, tumor, cyst, etc., etc. This is by far the most common form.
  - (*d*) From the simultaneous obstruction of both ureters (rare).
- *B.* Stricture of the ureter under the four above-named conditions.
- *C.* Kink in the ureter of a floating kidney or angular attachment of the ureter to the pelvis under similar conditions.
- *D.* Tumor of the kidney.
- *E.* Tumor of the base of the bladder or of other organ involving both ureters.
- *F.* External pressure.
  - (*a*) Myomata of the uterus.
  - (*b*) Cancer of the uterus or rectum.
  - (*c*) Abdominal tumors.
  - (*d*) Laceration of the cervix with subsequent involvement of the ureter in the cicatrix.
- *G.* Venous congestion. An excessive degree of exudate when associated with congestion of the intertubular veins may cause a degree of lateral pressure which may result in suppression. The suppression of urine in the author's case may be explained in this way.

II. Non-obstructive suppression of urine may occur as a result of:

- *A. Reflex circulatory* or *vasomotor disturbance* in the kidney. This may occur—
  - (*a*) *After operations* which concern in any way the complex sympathetic nervous mechanism of the abdominal cavity, *e. g.*, nephrectomy, nephrotomy, operations on the bladder, operations on the male or female genital tract.
  - (*b*) After the *passage of a catheter* or a sound into the bladder. This agent may act either as a reflex or as a septic infection.
  - (*c*) As a result of the *lodgment of a calculus* in one ureter, the other remaining free. The reflex in this case may result either from the nerve irritation at the site of lodgment of the calculus or from the acute tension which occurs within the pelvis of the obstructed kidney.
  - (*d*) *Trauma*, subcutaneous or direct. In a case related by Dr. Oliver, a bullet merely cut a groove in the convexity of one kidney yet the patient died from suppression of urine.
  - (*e*) *Hysteria.*
  - (*f*) *Drug vaso-constriction, e. g., ergot,* auto-nephrotoxins.
  - (*g*) *Extensive burns,* may act either by a reflex or by sepsis.
  - (*h*) *Meningitis.* (A case reported by Fussell, in *Pediatrics*, August, 1901.)
- *B. Degenerative changes in the kidney.* These may result from:
  - (*a*) Poisoning by drugs such as phosphorus, carbolic acid, cantharides, turpentine, etc., possibly by ether and chloroform when used for surgical anesthesia.

- (b) Acute infectious diseases such as septicemia, cholera, scarlet fever, dysentery, etc.
- (c) Acute nephritis.
- (d) Auto-nephrotoxins. This is a toxic product, a *cytotoxin*, which is formed as a result of active disintegration in one kidney and which acts to produce marked degenerative changes in the opposite sound kidney. Castaigne and Rathery suggest that perchance certain renal disturbances now described as the result of reno-renal reflex nervous influences or as sympathetic nephritis are the outcome rather of *auto-nephrotoxins.*
- (e) Tubercular or cystic disease of both kidneys may progress *to the total destruction* of all secreting tissue.

C. *The direct effect of lessened heart force.* When the aortic pressure sinks below 40 mm. Hg. *the urinary secretion stops absolutely.* So long as the blood pressure is above this height the secretion is more or less proportional to the pressure, and changes with the changes in this pressure.

D. *Trauma.*
- (a) Direct paralyzing injury to both kidneys or to one kidney when the other is non-functionating.
- (b) Rupture of the *kidney,* the *ureters,* or the *bladder* with extravasation into the tissues of all urine secreted. This must be included under the old definition of suppression of urine, but is not believed to belong to the subject at all.

E. *Anesthesia.* It would be very difficult to classify this etiologic factor more accurately, for the reason that we do not certainly know the exact manner in which these drugs act on the kidney. Kemp concludes that ether, while producing a rise in *general arterial pressure, manifests a deleterious and* specific influence in a lowered renal pressure and almost immediate diminished secretion, whereas chloroform, when producing a decrease in carotid pressure, exerts but an insignificant effect if any on the renal pressure or excretion. On the other hand, Galleazi and Grillo maintain that the diminution of renal permeability is more marked when chloroform is used than when ether is administered, and they claim that this result renders any infectious disease with which the patient so anesthetized may be affected more severe.

PATHOLOGY.

A complete study of the pathologic lesions mentioned above as etiologic factors would be both impracticable and undesirable in the present paper. The pathology of those conditions enumerated under the heading of obstructive suppression is so well understood and so well described in all text-books of pathology that its recapitulation is considered unnecessary. The same may be said of some of the conditions included under the heading of non-obstructive suppression, yet it is this particular section of the subject which presents the perplexing questions, and hence it is this section which should receive most attention.

In view of the fact that we are dealing with alterations in the functional value of the specific parenchyma of the kidney, it is certainly true that we will find a physiologic basis to be the correct one on which to construct our pathologic and therapeutic superstructure.

PHYSIOLOGIC CONSIDERATIONS.

The kidney is a compound tubular gland in which the vascular apparatus is so arranged as to afford (a) the most favorable conditions for filtration of the liquid parts of the blood, and (b) the most favorable conditions for the elimination of the waste products of body metabolism by its specific excretory cells. The secretion of this gland is complex in its composition, contains most of the end products of the varied metabolism of the tissues and represents the most vital excretory product of the body. This secretion may be looked on as a solution of a great number of organic and inorganic substances in water.

The nerve supply of the kidney is vasomotor (vaso-constrictor and vaso-dilator) and secretory. The vessels of the kidney, like those of all parts of the body, are under the direct control of the central nervous system. The secretory nerves are not fully understood. The nerves are definite off-shoots from and an integral part of the vast abdominal sympathetic system, and are connected with the spinal cord through the anterior roots of the eleventh, twelfth and thirteenth dorsal nerves. These nerves enter the hilum of the kidney both as a plexus closely investing the renal artery and as fibers which run parallel to the vessels and can be traced as far as the cortex.

The secretion of urine consists of two distinct processes: (1) The secretion of water and salts, and (2) the elimination of urea and related bodies. The secretion of the waters and the inorganic salts undoubtedly takes place through the glomerulus. The excretion of urea and related bodies is believed to take place through the agency of the epithelial cells lining the convoluted tubules. These cells perform the function of secreting the specific nitrogenous elements of the urine, which are taken up into solution by the water which flows downward from the glomerulus and a completed urine is formed.

The secretion of water and inorganic salts seems to be largely, yet not entirely, a question of mechanical filtration or separation and to depend mainly on two factors.

(1) The difference of pressure between the blood in the glomerular capillaries and the urine in Bowman's capsule. The pressure in the tubule is practically *nil* under normal circumstances, so that the only changeable factor will be the blood pressure in the capillaries.

(2) The rapidity of the blood flow through the glomeruli. The more frequently the fluid is presented to the filter the more rapidly will the process go on.

The glomerular circulation may be affected in several ways. The pressure in the glomerular capillaries will be raised and the velocity of the blood increased:

(1) By a rise in the general blood pressure. This may be due to (a) increased force and frequency of the heart, (b) constriction of vascular areas in other parts of the body.

(2) By dilatation of the renal arterioles, the general blood pressure remaining constant.

(3) By obstructing the renal vein. In this case the velocity will be diminished.

The pressure and velocity in the glomerular capillaries will be diminished:

(1) By diminished general blood pressure, which may arise from a weakening or slowing of the heart beat, or from dilatation of vascular areas in other parts of the body.

(2) By constriction of the vessels in the kidney itself.

As has been stated above, a diminution of aortic pressure below 40 mm. Hg. results in an absolute cessation of secretion and variations in pressure above this point will be followed by corresponding variations in the amount of urine secreted.

It is to this vasomotor mechanism of the kidney that we must look for the regulation of the flow of blood through the kidney, hence for a rational explanation of variations in the secretion of urine.

Stimulation of the vaso-constrictor fibers causes contraction of the arteries of the kidney, a diminution in the size of the organ and a diminished secretion of urine. Stimulation of the vaso-dilators will have precisely the opposite effect. Both of these sets of fibers are probably brought into play under normal conditions by reflex stimulation, and thus serve to regulate the flow of blood through the kidney and thereby influence its functional activity.

It has been estimated that, in strong diuresis, 5.6 per cent. of the total quantity of blood sent out of the left heart in a minute may pass through the kidneys, although the combined weight of these organs makes only 0.56 per cent. of that of the body.

That the formation of the water of the urine is not entirely a question of filtration, however, would seem to be demonstrated by two experimental facts:

(1) Ligation of the renal vein raises the blood pressure in the glomerular capillaries almost to that of the

mention as a symptom, in connectio
surgical diseases of the kidney and urete
discussed in full, in so far as he knows
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he urea is selected from the blood and
rred to the lumen of the tubule without
hemic composition and without accumula-
cell.

PATHOLOGIC CONSIDERATIONS.

lex Vasomotor Suppression of Urine.—The kidney enchyma, it will be remembered, is enclosed within firm unyielding capsule, analogous in every way to the apsule (sclera) of the eye and the bony casement of the rain. Under normal conditions a vaso-constriction diminishes the amount of blood entering this capsule, the idney capillaries become anemic, and an amount of lood escapes through the veins exactly equal to that which enters. Under normal vaso-dilator action the mount of blood entering the closed sac is exceedingly ncreased, the entire organ increases in size, the capsule ecomes tense, yet again the venous return is entirely fficient and carrys off an amount of blood exactly equal o that which enters. The blood circulation through the idney is perfect in each instance, but the amount of lood flowing through the organ is widely different. The regulation of the exact amount of blood that shall

hrough the kidney, it will be remembered, is the
ult of what may be called normal reflex stimu-

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to cause a temporary or perhaps a some-
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n of urine will immediately stop. The kid-
ecome anemic and the blood contained in the
ll flow off through the veins. Now, it has been
strated anatomically that the kidney receives a
c anastomotic circulation through its capsule. Fur-
ermore, it has been demonstrated that simple ligature of the renal artery will cause a condition of red infarct in the kidney, while the ligature of this artery, after the complete removal of the capsule, will result in a condition of white infarct. This means that after ligature of the renal artery blood flows through this anastomotic circulation into the kidney in sufficient quantity to engorge the vessels, yet under insufficient pressure to reestablish the circulation of the blood through the organ. A condition of red infarct results. When the capsule is removed, however, this anastomotic circulation is cut off and all blood left in the kidney drains off, leaving the capillaries empty and the tissues white.

Precisely the same conditions are presented when a sudden vaso-constriction closes the vessels of the kidney. The blood flow is arrested and this same anastomotic circulation engorges the capillaries and veins of the cortex. The endothelial cells in the walls of the capillaries and the small veins have suffered a degenerative change, however, because of the arrest of blood, and they permit the serum to leak out between the tubules. Now, since it is improbable that a complete obliteration of the arterioles by vaso-constriction could endure for a very extended period of time, let us see what would happen when these arterioles begin to open again. Blood is once more pumped into the kidney, but the venous return is seriously impeded by the lateral pressure of the exudate which has formed around and between the paralyzed veins and the tubules. The congestion of the vessels of the kidney becomes more intense with each heart beat, and a condition analogous to experimental ligature of the renal vein ultimately results. The blood flow through the kidney is stagnant, no urine is secreted, the capsule becomes over-distended and tense, the blood becomes highly venous and the kidney parenchyma suffers serious degeneration from insufficient oxygen and food supply. This is precisely the lesion found at the time of operation in the kidneys of the patient whose case has been reported in this paper.

Should the overpowering stimulation of the nervous mechanism of the kidney result in either a paralysis of the vaso-constrictors or a stimulation of the vaso-dilators, the effect on the circulation would be the same and the reasoning as to the ultimate effect on the kidney of both tion revealed the presence of adhesions in 96, or 42.5 per cent.

In 123 cases of ulcer with adhesions, collected by the same authority, the pancreas was involved in 49, the liver in 23, the liver and pancreas in 10, the colon in 7, the liver and colon in 4, the spleen in 2, the mesentery in 3, and three or more organs, including, in addition to the above, the omentum, diaphragm, abdominal wall and kidney, in 15. I shall not attempt to discuss the cases where perforation has occurred with a resulting localized abscess, as the symptoms of this condition are usually acute, the septic predominating over those of disturbed function.

It is thus readily seen that the formation of adhesions between the stomach and the other abdominal organs is of such frequent occurrence in cases of chronic ulcer as to vest the subject with considerable importance.

The distribution of these adhesions is readily understood from the fact that about 80 per cent. of all gastric ulcers are situated on the posterior surface of the stomach or at the pylorus.

This, of course, brings the larger number more or less intimately in contact with the liver and pancreas and it is to one or more of these organs that we find the adhesion has most frequently occurred. As would be expected, the next most common point for their formation is the transverse colon. Adhesions to the abdominal wall, mesentery, spleen and kidney are relatively uncommon.

The area of the stomach wall involved in the inflammatory process and the density of the resulting adhesion or adhesions are subject to wide variation. We may find a small surface only which has become so fixed, with a resulting conical prolongation of the stomach in that direction or the amount adherent may be as large as the hand. Indeed, in those rare cases of plastic perigastritis the entire surface of the organ may be involved in the inflammatory process and by general widespread adhesions which so compress its walls and diminish its size as to practically put it out of commission. The adhesions may be, and usually are, very dense or, in a few instances, easily separable. In cases where they have been present for a long time and the area of the serosa involved is small, they may have lengthened out into long peritoneal bands, much resembling those found after ventro-suspension of the uterus. In such cases the normal mobility of the stomach may have been restored and the annoying symptoms spontaneously disappear.

SYMPTOMS.

The symptoms due to perigastric adhesions are often very distressing and too frequently misinterpreted. In the milder cases, where the area of the stomach wall involved is small and the adhesions are not put much on the stretch, there may be present, but vague and indefinite, digestive symptoms marked by eructations of gas and even fluid, possibly pain, and a general feeling of gastric unrest.

The symptoms, however, vary in importance and intensity with the portion of the stomach wall involved in the adhesions. If they are at or near the pylorus and seriously interfere with stomach drainage, very extreme disturbances may result. These patients will present symptoms analogous to those accompanying pyloric stenosis, i. e., dilatation of the stomach, eructation of gas and fluid and vomiting, which, in milder cases, may occur irreguarly, but in the more severe class soon follows the ingestion of food and may be so frequent and excessive as to seriously endanger life through malnutrition.

Pain is usually present in these cases and in those subject to frequent vomiting is often most intense and distressing. These patients present signs of digestive disturbances that are more or less constant and can not be relieved by ordinary methods of treatment, diet, regulation of mode of living, etc., and in those in whom the functional activity of the stomach is seriously impaired by the adhesions we find a progressive loss of weight, even extreme emaciation, and gradually increasing weakness, terminating in death from starvation and exhaustion.

DIAGNOSIS.

The diagnosis of perigastric adhesions, while presenting many difficulties, should be more frequently made, and in some cases is comparatively easy. Probably those cases will be more easily recognized where the adhesion has formed with the anterior abdominal wall. If the portion of the stomach wall involved is at a point remote from the pylorus the functional disturbance will be slight and marked chiefly by pain while the stomach digestion is at its height. Pressure over this region will elicit tenderness more or less sharply localized, which subsequent examinations will show to be constant at this point. In some patients with thin abdominal walls an area of thickening or induration may be made out.

When the pyloric end of the stomach participates in the adhesion the symptoms are usually very pronounced and may closely resemble those of pyloric stenosis. In other words, they are those resulting from dilatation of the stomach. In these patients the distress is most marked at a time corresponding to the last stage of gastric digestion. Pain appears at this time, which may soon disappear or may last for hours, and is found to exist in the right hypochondriac region. During the paroxysm the patient can bear no pressure at this point, and I have known instances where the clothing about the upper abdomen, corset, waist bands, etc., was habitually removed or loosened soon after eating to secure relief from pressure. Vomiting in these cases is an almost constant symptom and may become so constant as to actually threaten the sufferer's life, as is illustrated in Case 1. As time elapses and the dilatation of the stomach increases, owing to impaired drainage, the classical symptoms of that condition, which need not be described to you, become more and more pronounced until the condition of the sufferer is really pitiable. Palpation may in these also reveal, at the point of greatest tenderness, an area of induration. This induration may be marked and easily felt, as in Case 1, or it may be very indistinct or not demonstrable at all.

In those cases where the adhesion exists between the lesser curvature and the under surface of the left lobe of the liver the symptoms are described by Fenwick as follows:

> The chief result of the adhesion is to prevent the downward displacement and forward rotation of the stomach which normally follow the ingestion of food and to impede the contractions of its longitudinal and circular muscular fibers. This interference with the motorial functions of the organ is probably responsible for the sense of fulness and discomfort after meals, of which complaint is so often made, and for the flatulence and acidity which ensue from the use of those articles of diet that are difficult of solution or are prone to undergo fermentation.
>
> It is also to be observed that in many cases of this description the patient experiences a constant dragging pain in the epigastrium or right side of the chest, whenever he indulges in physical exertion after meals or suffers from anxiety or excite-

ment. The fact that rest in the recumbent posture or the application of an elastic belt to support the stomach affords relief appears to indicate that the pain is due to a mechanical strain on the adhesions caused by the weight of the organ or by violent contractions of its walls.

In Case 3 of the series here reported the patient, who was a carpet layer, noticed that the pain and discomfort was much augmented whenever he got down on his hands and knees to drive tacks in a carpet, and he had to give up this kind of work. The operation revealed the lesser curvature of the stomach adherent to the under surface of the left lobe of the liver, and it may readily be seen that the position above described would increase the dragging on the fixed point. I have since employed this posture as a routine measure in the examination of patients suspected of having perigastric adhesions and it has proven of considerable value as a diagnostic aid. If the adhesion is to the anterior abdominal wall, on the patient's assuming the hands and knees position the pain and sense of dragging will be relieved. If the adhesion exists between the stomach and the liver or pancreas these symptoms are much augmented.

An adhesion existing between the pylorus and the liver presents symptoms closely resembling those described when discussing the adhesion of the pyloric end of the stomach to the abdominal wall. Dilatation, with its distressing symptom complex, appears early and the functional disturbance steadily increases. In these cases the pain is a most variable symptom as to location. In Case 2 the patient complained of almost constant pain immediately under the right nipple. The pain may be most prominent immediately under the ribs on the right side of the chest, radiating from this locality to the right infrascapular region. Deep pressure over the right hypochondrium will usually reveal an area of much tenderness.

If, as frequently occurs, the pyloric end of the stomach is adherent to the gall bladder, interfering by traction on that viscus or its ducts with drainage, we may have added to the symptoms above mentioned those common to disturbance of gall-bladder function. Indeed, the signs may point more emphatically towards gall-bladder disease than to gastric disturbance, as in Case 4, when a diagnosis of cholecystitis having been made, the operation revealed an adhesion between the pylorus and the gall bladder due to a chronic gastric ulcer, the separation of which without opening the gall bladder was followed by complete subsidence of the troublesome symptoms.

In very thin patients it may be possible by palpation to feel a hardened area over the right lobe of the liver if it projects, as it frequently does in such cases, below the ribs.

Adhesions occurring between the stomach and colon owing to the mobility of the structures involved, may occasion few troublesome symptoms. If the pylorus should be concerned in the adhesion to the extent of interference with stomach drainage the usual signs of that condition would be manifest.

I have seen but one case of adhesion of the stomach to the colon, and in that instance the patient complained more of symptoms referable to the bowel than to the stomach. Operation in this instance, Case 6, revealed an adhesion between the greater curvature and the transverse colon which, when the stomach was empty, exercised sufficient traction on the colon to produce marked kinking.

The diagnosis of adhesions between the stomach and the pancreas presents many difficulties and may usually be only surmised by the existence of the general symptoms of such adhesions and the acceleration of pain and functional disturbance when the patient assumes the hands and knees or knee chest posture, which will increase the dragging as the stomach pulls on the fixed point.

In patients suspected of having perigastric adhesions the following considerations are of value:

1. The persistence of troublesome symptoms despite careful dietetic and hygienic regulations.
2. Previous history pointing to chronic ulcer of the stomach.
3. Evidence pointing to the occurrence of a localized peritonitis during the ulcerative period.
4. The fact that change of posture may greatly modify the pain. The hands and knees position increasing the distress in adhesions to the liver and pancreas and relieving that due to adhesion to the abdominal wall. The recumbent posture relieving that due to adhesion to the liver and pancreas and increasing it in adhesion to the abdominal wall.
5. Tight bandaging may ease the distressing symptoms, by relieving tension of the adherent surfaces.
6. The presence of a more or less fixed point of tenderness.
7. The detection of an area of increased resistance or induration.
8. The employment of artificial distension of the stomach for purposes of examination. This will in some cases reveal more or less distortion of the organ and may, in cases of adhesion of the liver, render the adherent area more accessible to palpation. For this purpose the method advocated by Mayo, who uses the stomach tube and the bulb of a Davidson syringe, inflating the stomach with air, will be found most satisfactory.
9. The symptoms and physical signs of gastric dilatation which, when due to perigastric adhesions, come on more suddenly and are accompanied by more pain than when occasioned by cicatrization.

The treatment of perigastric adhesions must be surgical if permanent relief is hoped for.

It is true that in many cases where the adherent area is large and the adhesions very dense, as is frequently the case when the liver and pancreas are involved, even surgery is unable to offer relief, but when the adhesion between the stomach and the liver is not too extensive it may be separated and the patient cured. Adhesions to the pancreas, though presenting many difficulties to operative interference, may, in some instances, be successfully separated. In those cases where the pylorus is adherent to the liver, gall bladder or abdominal wall, or where the adhesion exists between the stomach and the colon, brilliant results may be secured by surgical treatment.

As the condition of many of these patients is deplorable, an exploratory laparotomy should be made unless the symptoms point unmistakably to the existence of adhesions so extensive that their separation is out of the question. Operation in any of these cases will, of necessity, be often of an exploratory nature, as an exact diagnosis of the condition is usually impossible. If, when the abdomen is opened, the case is found to be inoperable, so far as the separation of the adhesions is concerned, some relief may be afforded by making a gastroenterostomy at the most dependent portion of the stomach. If it is decided that the adherent surfaces may be separated safely, this is done in the usual manner. If, during the separation of the adhesions, the wall of the stomach or the adherent hollow viscus has been weakened it must be infolded with Lembert sutures. If the separation leaves large raw surfaces the danger of adhesions again forming may be lessened by covering these areas with omentum or Cargile membrane. If dilatation of the stomach is present a gastroenterostomy should be made whether the adhesions are divided or not. Frequently the operation may present many difficulties and again it may be extremely simple. It has, in my experience, proven, on the whole, a very satisfactory procedure to patient and surgeon alike, in evidence of which statement I submit brief histories of seven cases.

These are all cases of perigastric adhesions due to chronic ulcer.

I have not included in this report those cases so frequently encountered of adhesion between the stomach and an inflamed gall bladder, where the gall-bladder symptoms predominate, except in one instance where the diagnosis of gallstones was made and an adhesion between the stomach and an otherwise healthy gall bladder was found.

Case 1.—E. J., a female, aged 32 years. She complained of very acute abdominal pain coming on soon after eating, which was frequently attended with vomiting. Coughing, sneezing, etc., were attended by the most excruciating pain. She had been constantly under treatment for one year, her ailment being diagnosed as dyspepsia, and was almost discouraged concerning her condition. Owing to the difficulty with which food was retained in the stomach, she was extremely emaciated. An examination of the abdomen revealed, on palpation, a tender indurated spot about one-half inch above and the same distance to the left of the umbilicus. This, together with the symptoms above enumerated, led to the diagnosis of an adhesion between the stomach and the abdominal wall, with, possibly, the formation of an abscess. The abdomen was opened and the adhesion existing between the anterior surface of the stomach and the abdominal wall was readily found.

This was separated without difficulty. No pus was present and the stomach wall at this point was found to be intact, the ulcer having apparently healed.

The ulcerated area, however, was folded in and retained by close suturing. The troublesome symptoms immediately disappeared and, fifteen months after operation, had not recurred. The patient rapidly regained her lost weight, and has since been in perfect health.

Case 2.—Male, aged 24. Had been treated three years for gradually increasing symptoms of digestive disturbance. These at first consisted of an uncomfortable sense of fulness after eating, which persisted for some time. Soon he was troubled with eructation of gas and fluid and then with frequent vomiting, which would appear an hour after eating. No history pointing unmistakably to ulcer of the stomach, but at one time had been quite sick for two weeks with symptoms of peritonitis. At the present time all symptoms are much aggravated. Soon after taking food he has severe pain in left side which seems more intense under right nipple. Vomiting soon follows and after emptying the stomach the distress gradually subsides. Has lost much weight and is very much concerned as to his condition. Is ravenously hungry, yet fears to eat. Examination reveals a very tender spot just to the right of the median line under free edge of ribs. At this point an obscure sense of increased resistance is made out by deep palpation Distension of the stomach with air (Mayo's method) brings on at once all the symptoms of pain and gastric distress and reveals the fact that the organ is much dilated, the lower border being two inches below the umbilicus.

The tender spot above referred to is now so sore that he can scarcely bear the slightest pressure on it. The history, together with the physical signs, led to the provisional diagnosis of adhesions existing between the pyloric end of the stomach and the liver and laparotomy was advised.

At the operation the pylorus was found firmly adherent to the right lobe of the liver, about one square inch of tissue being involved in the adhesion. Separation of the tissue was effected without difficulty and an anterior gastroenterostomy made at the most dependent part of the stomach.

The raw surface of the pylorus was covered with omentum. Relief from all troublesome symptoms was immediate and complete, the young man rapidly regaining his former weight and strength.

Case 3.—Male, aged 37. History pointing to existence of gastric ulcer six years before. For the last few months he had pain after eating, eructations of gas and finally vomiting, which now occurs several times daily. Has lost weight and strength and had to abandon his vocation, that of carpet laying, as the hands and knees posture assumed by him at his work greatly increased the pain. Examination revealed a very tender area exactly in the median line and just at the end of the sternum. Says that he vomits a few minutes after taking food, frequently ejecting all that he has eaten. Is very despondent and threatens suicide unless relieved. On taking the hands and knees position he gives every evidence of suffering intense pain, which is immediately relieved, but not abolished, when he lies on his back. Says that at times if he will lie down immediately after eating that the distressing symptoms may be very much lessened in severity and that he may not vomit at all. He refers the pain to the entire upper abdomen, and says that at its height it extends across from side to side just under the free edge of the ribs.

An exploratory laparotomy revealed extensive adhesions between the lesser curvature of the stomach and the under surface of the left lobe of the liver, involving a surface about two inches in diameter. These adhesions were separated with great difficulty and several vessels required ligation.

The large raw surfaces remaining, both on the stomach and the liver, were covered with Cargile membrane. Shock was pronounced and only overcome by most vigorous measures. To my great gratification readhesion of the denuded surfaces did not take place and recovery was rapid and absolute.

Case 4.—Young woman, aged 23. History of recurrent attacks of pain and soreness in upper abdomen for the last four years. Usually came on an hour or two after eating, and lasted from two or three hours to several days. Intervals between the attacks constantly growing shorter. Pain and sense of burning extending from right hypochondrium across to the left side and up to right shoulder blade. Vomiting occurred frequently, but not always present. Pressure of clothing could not be endured during the paroxysm. No history of hematemesis. Examination revealed exquisite tenderness over the gall bladder. The recurrent nature of the trouble, the character of the pain and the location of the tender area led to a diagnosis of gallstones.

Operation revealed an adhesion between the gall bladder and the pylorus, which, when separated, was seen to be due to a chronic gastric ulcer.

The gall bladder was apparently perfectly healthy, no stones could be felt in it or the ducts and the operation was concluded with the separation of the adhesion, and in folding the ulcerated area of the pylorus with Lembert sutures, as the stomach wall at this point appeared very thin.

Complete recovery rapidly ensued, thus adding unmistakable proof that the diagnosis of gall-bladder disease was a mistaken one.

Case 5.—Married woman, aged 21. History of chronic ulcer of the stomach four years previously. Lately has been suffering extreme pain after eating, which was located in the right hypochondrium and extending to the right chest. Vomiting was of frequent occurrence, coming on soon after eating and she was rapidly losing weight. The entire upper abdomen seemed tender to pressure and she had worn no corset or tight skirts for months.

As long as she remained in the recumbent position the pain and vomiting was less severe and some days she would suffer very little. Exercise greatly aggravated all symptoms.

Operation revealed adhesions between the lesser curvature, just above the pylorus and the liver. These adhesions were very firm and extended over an area half as large as the hand. Their division was quite difficult, and several times I thought I had better give up the attempt. It was finally accomplished and the large raw surfaces covered with omentum and Cargile membrane. The patient stood the operation well and made a good operative recovery, but the troublesome symptoms rapidly recurred, evidently because of the reformation of the adhesions. Refusing further operative interference, the case passed from observation.

A blunder was committed in this case by persisting in separating these wide and dense adhesions and by omitting to make a gastroenterostomy. Confronted again by such conditions, I should perform a gastroenterostomy and let the adhesions alone.

Case 6.—Married woman, aged 44. History pointing to ulcer of the stomach several years before. For the past three or four years has been troubled with vague and indefinite abdominal symptoms. These were apt to appear three or four hours after taking food and, to use her own description, "the right side would feel as if it were going to burst, while the left side felt flat." Pain extended at this time from the ribs to the groin on the right side and across the upper limits of the abdomen and was colicky in character. During the paroxysm distension of the abdomen was quite marked.

Vomiting might occur, but was usually absent. After a time varying from one to three hours, the symptoms would gradually subside, only to reappear following the next meal. Strict adherence to a liquid diet would often grant comparative freedom from the attacks for days at a time, but the taking of solids was certain to be followed by distress. Growing tired of the restricted diet, the patient asked if an operation would not give her relief.

An exploratory laparotomy disclosed an adhesion between the greater curvature of the stomach and the transverse colon which, when the stomach was empty, so drew on the latter as to produce a decided "kinking" of the gut which was sufficiently acute to interfere with the ready passage of its contents. This adhesion was easily separated and the surfaces participating in it were covered with omentum. Recovery was uneventful and has remained complete.

Case 7.—Male, aged 35. No definite history of ulcer. For several months had been suffering with symptoms of digestive disturbance manifested at first by eructations of gas and fluid and some abdominal tenderness. Soon began to vomit at irregular intervals and at the present time vomiting occurs several times daily and is accompanied by severe dragging pain over the upper abdomen. Is steadily losing weight and has had to entirely abandon business. Examination reveals much tenderness in right hypochondrium and an area of increased resistance above and to the right of the umbilicus. Distension of the stomach with air shows it to be much dilated and its movements may be seen through the thin abdominal wall.

All the symptoms are aggravated on his assuming the "hands and knees" position. Operation revealed adhesions between the pylorus and the liver, the pyloric end of the stomach being held firmly against the under surface of the liver while the stomach, enormously dilated, extended far below the umbilicus. The adhesion was separated with no especial difficulty and a gastroenterostomy was made. Much improvement followed the operation and, although restoration of function was not perfect, the patient having occasional attacks of pain, he had been able to resume active business.

A study of these cases would seem to warrant the following conclusions:

1. Perigastric adhesions as sequelæ of chronic ulcer of the stomach are not uncommon.
2. Their existence should be suspected and even positively diagnosed more frequently than has been the case.
3. In many such cases the relief afforded by the operation is absolute and may be secured in no other manner.
4. The operation is often an extremely simple one.
5. If the adhesion involves surfaces so extensive that its recurrence must be inevitable, relief may be best secured by a gastroenterostomy allowing the adhesions to remain.
6. The use of omental grafts or Cargile membrane is of value in preventing the readhesion of the separated surfaces.

THE SURGICAL CONCEPTION OF PYLORIC OBSTRUCTION.*

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Until within the past few years pyloric obstruction was regarded as due either to cancer so situated and so advanced as to render its removal impossible or excessively hazardous, or to a non-malignant pathology usually so obscure and so difficult to diagnose as to make any attempt at surgical interference uncertain and unjustifiable. Hence, surgeons were rarely encouraged to seriously consider operative procedures in stenosis of the pyloric orifice, and the victims of this condition were, with a few exceptions, permitted to die or to drift into chronic invalidism without a single rational effort being made to remove or correct the causative pathology.

It has been only within the past decade that the advances made in the surgery of the upper half of the abdomen and of the stomach in particular have inspired us with a new confidence, and given us a much clearer and more practical idea of this causative pathology, suggested a means of diagnosing it earlier, and indicated plainly the only measures we can reasonably rely on to prolong the lives of these patients or restore them to health.

Those who have kept in touch with these advances and thoughtfully compared their own clinical experience with that of the comparatively few workers in this field will, I believe, agree that the palliative, expectant treatment of the past must eventually give way to the more promising, prompt, rational measures suggested by the surgical conception of pyloric obstruction.

These experiences, as I interpret them, teach us that in at least 95 per cent. of all cases this obstruction is due either to cancer, ulcer or inflammatory adhesions, viz., to a pathology that at no time and under no conditions can be removed or corrected by any combination of medicinal or dietetic measures, but which in every instance at some stage of its progress affords an opportune time for removal or favorable modification by appropriate operative procedures.

We have learned, too, that the fears and apprehensions of excessive danger that so long retained our surgical endeavors in the upper half of the abdomen were greatly exaggerated and that the surgery of this part of the peritoneal cavity is not attended by unusual risks if we choose an opportune time for operating, while the morbid process is yet circumscribed and before the recuperative and reparative powers of the patient are exhausted. Indeed, it has been shown that the stomach will bear almost any kind of surgery with comparative safety to the patient if the operator is clean, the patient is in good condition, and the small intestines are not unnecessarily exposed or subjected to trauma.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

Instructed by recent operating-room observations, we have modified many of our old ideas of pathology that were formed in the dead house. Not a few of these changes have an important surgical bearing. For example, it has been found that cancer of the pylorus, although situated in a part of the lymphatic system, is singularly slow to extend to nearby glands and, consequently, often offers really a better opportunity for complete removal than cancer of the uterus or breast. (I think it must be very rare, however, to find malignant disease so far advanced as to demand a complete gastrectomy, except the glandular involvement be such as to contraindicate any extensive operation.)

We know that gastric ulcer is rarely single and, while one may be able to diagnose and, in the course of the operation, to locate the particular ulcer that produces the symptoms and, perhaps, be tempted to excise it, it is safer to conclude that there may be one, two or three smaller ulcers so obscure as to escape detection or prevent excision. For this reason gastroenterostomy should usually be the preferred surgical treatment for gastric ulcers.

The fact that nearly three-fourths of the present mortality and sufferings from pyloric cancer and ulcer are due to the occlusion of the pyloric orifice must be regarded as a strong plea for the surgeon to relieve the obstructive symptoms, even when it is apparent that the perfect removal of the pathology is impossible or impracticable.

It seems highly probable that neither cancer, ulcer nor inflammatory adhesions are, as a rule, separate and distinct entities in this pathology, but are not infrequently associated as successive factors in the morbid process that results in organic stricture of the pylorus. It is certainly fair to presume that cancer in this region, as in the lip, cervix, nipple and elsewhere, finds its preferred, if not its essential, starting point in cicatricial tissue; and here this cicatricial tissue is most likely to be found about bands of adhesions and the healing of ulcers.

It has been customary in the past to regard blood dyscrasia as the chief cause of gastric ulcer; but I am inclined to believe that this view has been accepted more on account of its being the only available one than because of its sound pathologic basis. To me it seems more consistent to assume that the etiologic factors of gastric ulcer are not different from those of ulcer in other parts of the body, except as modified by local conditions, the anatomic relations and the physiologic functions of the stomach, and that in most instances the necrotic process is preceded by a local circulatory disturbance or lowered vitality of the part, and that in the stomach such degenerative changes are hastened and intensified by the well-known digestive effects of the gastric juice on devitalized tissue. The local circulatory disturbance, the locus minoris resistentiæ, is provided here whenever omental attachments or peritoneal adhesions drag, bind or compress any part of the stomach in such a manner as to impair or abolish its physiologic mobility or interfere with its normal blood supply.

That such omental attachments and peritoneal adhesions often occur with any nearby or remote intraperitoneal inflammation will not be questioned by any operator familiar with gall-bladder, appendiceal and tubal inflammations, and is able to recall how almost invariably the omentum is involved and peritoneal adhesions formed.

Just what proportion of cancers are preceded by gastric ulcers and just what proportion of ulcers are caused by peritoneal bands of adhesions or omental attachments, no one as yet may presume to decide; but the fact that there is a very intimate relationship between these causative factors, with an inflammatory lesion at the one extreme and malignant disease at the other, should be kept in mind in taking the history, in making the differential diagnoses and in deciding on the treatment of each case.

I am quite sure that in a number of instances I have been able from the history to trace the successive steps of the pathologic process from an old inflammatory lesion (appendiceal, gall bladder or tubal) to a cancer of the pylorus or to a gastric ulcer; and within the past two months I have operated on two cases where such conclusions were suggested by the history and afterwards verified on the operating table. In one case, the obstruction was due to cicatricial contraction following an ulcer. Some years before, the patient had suffered from a well-marked attack of appendicitis lasting nine weeks. After a recurrent attack symptoms of pyloric obstruction appeared which in time became so aggravated as to lead him to seek surgical aid. The appendiceal mass, the omental attachment, the ulcer, etc., were demonstrated in the course of the operation. The history of the second case was typical of chronic ulcer with partial occlusion for a period of three years. Since November, 1902, the symptoms had rapidly become more serious and indicative of malignancy. The operation demonstrated the existence of a cancer of the pylorus freely movable and with but little glandular involvement. In this connection is it not logical to believe that the hemorrhage that so often occurs a number of days after gall-bladder operations may be due to ulceration from the above causes rather than from some obscure blood dyscrasia?

This explanation of the etiology of gastric ulcer, which I have submitted for your consideration, not only appears to harmonize with the general teachings of pathology, our operating-room findings and clinical experience, but is apparently supported by the results of a series of experiments on animals which I have recently undertaken, the details of which I hope to make the subject of a future paper.

This, in brief, is an outline of the pathology we may be facing whenever in our consulting room or at the bedside we are confronted by a patient suffering from any serious chronic disease of the stomach. And since the life and health of the possessors of this pathology depend as much on our promptness in recognizing it as on our judgment and skill in correcting it, the first and most important step toward the discharge of our duty to these patients is to hold ourselves prepared and on the alert to detect any early warning symptoms, and to spare no pains in our efforts to look beyond the symptoms to the morbid conditions that produce them.

Undoubtedly in the past we all have been inclined to permit the early stages of organic stricture of the pylorus to escape our observation. So long as an early and positive diagnosis served only to give an early and positive assurance of impending death or a life of invalidism, neither physicians nor patients were enthusiastic in securing convincing clinical evidence. The gathering of testimony that can only serve to deprive the patient of the last ray of hope seldom engages the best efforts of the medical profession.

But now as surgeons are beginning to demonstrate to physicians that we have good substantial grounds for our faith in the efficiency of surgery if employed early, we may reasonably hope to win that which at the present time we most need—the confidence of the patient and the co-operation of his first counselor, the internist.

GENERAL RULES FOR DIAGNOSIS.

Time will not permit our dwelling on the symptomatology of pyloric obstruction, and I shall only venture to call your attention to a few general rules that I have found helpful to me in systematizing my examinations and in aiding me to reach an early decision.

First.—Suspect all cases of serious chronic disease of the stomach to be suffering from pyloric obstruction and subject each to a rigid investigation unless the symptoms are plainly due to other causes.

Second.—Since the history is always our earliest and often our most significant and sometimes our only clue, it should be reviewed and studied in every case with scrupulous care, due attention being given to the age and habits of the patient, date of commencement of present illness, location and character of pain, loss of weight, vomiting of blood or undigested food, the length of time after eating the vomiting and pain occur, attaching especial weight to any history of previous attacks of abdominal pain or distress that might indicate a local or general peritonitis.

Third.—Note the appearance of the patient, whether cachectic, jaundiced, anemic or well nourished.

Fourth.—Locate the point of greatest tenderness, determine presence or absence of tumor, note contour of abdomen, and, most important of all, mark out the boundaries of the stomach when distended, for marked dilatation is almost pathognomonic of obstruction.

Fifth.—Examination of the stomach contents after a test meal, including the test for hydrochloric acid, may furnish very significant but never positive evidence as to the malignancy or non-malignancy.

Sixth.—The presence of a tumor with or without glandular enlargements is strongly suggestive but not absolute proof of malignancy.

Seventh.—Remember that in spite of the most painstaking investigation a certain proportion of cases will remain obscure if we employ only the ordinary means of diagnosis. In such cases, when malignant disease is suspected, or without such suspicion, if the obstructive symptoms be marked, or the patient is greatly distressed, or his general health and strength are being surely undermined, we have no right to postpone an exploratory incision. For, at the hands of an experienced operator, this is a safe procedure and always gives positive information that is obtainable in no other way. (I am convinced that each year many lives are sacrificed because of our hesitancy or delay in employing this important diagnostic measure.) The fact that pyloric obstruction is always a surgical disease does not mean that all cases are to be invariably subjected to operation. The same conditions that demand an exploratory incision usually require the surgical treatment, for with such symptoms, if there be no organic stricture, there is likely to be angulation of the pylorus due to adhesions, or spasmodic stricture due to ulcer, and neither are susceptible to any non-surgical treatment.

OBJECTS OF SURGICAL TREATMENT.

The modern surgical treatment of pyloric obstruction includes two objects:

First.—The establishing of a communication between the stomach and the duodenum or the jejunum.

Second.—The removal of the causative pathology.

The first is imperative in every instance, and under favorable conditions is attended by a moderate risk. The second is always desirable, but not always advisable; for the character and extent of the pathology together with the condition of the patient may not justify us in attempting the second object.

Many ingenious operations have been proposed and practiced for the accomplishment of these two objects. I am impressed, however, that it is a mistake to enter the operating room with the mind over-burdened and perhaps confused with the details of many complicated procedures, and I am sure that better results would be obtained if we, especially those of us who operate infrequently, would strive to perfect our skill and dexterity in the use of a few of the simplest measures that promise to accomplish the objects desired.

SOURCES OF ERROR.

Four other sources of error deserve mention:

First.—Attempting to do too much. The welfare of the patient as well as the best interests of surgery sometimes contraindicate an ideal operation. After doing a gastroenterostomy, it may be even advisable under certain conditions to postpone for a time the removal or correction of the pathology.

Second.—Selecting an operation that requires too long a time for its performance. Very few of these patients reach the operating table in condition to bear a two or three hour operation.

Third.—Forgetting that the first part of the duodenum is but two or three inches long, and one-third of this is only partially covered with peritoneum and a portion of the remainder is usually excised with the disease. Hence, to attach the esophagus or greatly dilated stomach to such a short immovable duodenum might in many instances produce undue tension, which here would be a dangerous violation of a well-known surgical principle. Unquestionably when in doubt the safer course would be to do a gastrojejunostomy.

Fourth.—While in the latter operation it is immaterial whether the anterior or posterior wall of the stomach be entered, it is most essential that the lowest point of the stomach be selected, and that we especially guard against the possibility of any kinking of the jejunum by appropriate measures, even to the doing of a supplementary enteroanastomotic if necessary.

A gastroenterostomy with the Murphy button and a pylorectomy or partial excision of the stomach after the method described by Dr. W. J. Mayo, are procedures that appeal to me on account of their simplicity, ease of execution, short time required and general effectiveness, and in my limited experience they have proven satisfactory. Those more dextrous in intestinal suturing and general operative skill might do well to select other methods or perhaps do away with any mechanical device like the Murphy button.

What, at the present time, needs to engage our thoughtful attention more than the multiplying of operative procedures, is a study of these morbid processes in life as they are revealed to us on the operating table, that we may acquire a quicker perception of the symptoms they produce, and become better prepared to judge when and when not to attempt the removal or correction of the pathology. We need, too, perhaps most of all, to secure the intelligent co-operation of the internists, for until they appreciate that pyloric obstruction is a surgical condition and one that can not be always even diagnosed except by an exploratory incision, and that can never be hopefully treated except by operation—until the internists not only accept these views in theory, but adopt them in practice, the *dernier resort* operation will continue to be the rule and the timely operation the exception, and the greatest benefits to be derived from pyloric surgery will not be realized.

REASONS FOR SURGICAL TREATMENT.

Our reasons for believing that the rational treatment of pyloric obstruction should be based exclusively on the surgical conception of the conditions, may be briefly summarized as follows:

First.—In 95 per cent. of all cases the pathology is an organic stricture of malignant or benign origin. It is certainly unreasonable to hope that stricture of this or any other part of the alimentary canal can be overcome except by mechanical means; and it is equally inconsistent to assume that pyloric cancer will yield to palliative treatment or to any other measures that are known to be of no value in the treatment of cancer in other parts of the body.

Second.—Pathology in this region can be reached, exposed and treated quite as conveniently as in other parts of the peritoneal cavity.

Third.—With an early diagnosis and the elimination of the "too late operation," pyloric surgery ought not to be attended by unusual risks, and should promise as good results as surgery done for equally grave conditions in other parts of the peritoneal cavity.

Fourth.—If the ordinary diagnostic measures are not sufficient to enable us to always reach a prompt decision, we know that here a small exploratory incision is a simple, safe procedure, which gives the patient but little discomfort and always affords the surgeon positive information as to the exact conditions.

Fifth.—When life and health are threatened by any intraperitoneal disease, benign or malignant, the timely removal or correction of the causative pathology by mechanical means is a rational procedure of proven value which we should always thoughtfully consider before we permit ourselves to regard the condition hopeless, or subject our patients to the chances of any empiric treatment.

The discussion on the papers of Drs. Knott, Niles and Ochsner will follow the paper of Dr. Ochsner in a subsequent issue.

THE SERUM DIAGNOSIS OF TUBERCULOSIS.

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In numerous journals at short intervals beginning in April, 1898, the Lyonese observers, Arloing and Courmont, have announced the discovery of a means for the diagnosis of early tuberculosis more certain and less harmful than any hitherto known. This naturally attracted great attention at once, although on account of the many difficulties in experimentation and control of results relatively few repeated the original measures. Many means and ways for the diagnosis of incipient tuberculosis have been suggested of late years, but all of them are either harmful or insufficient. By "incipient" tuberculosis is meant that period of the disease in which Koch's bacillus can not be clinically detected in the lesion it produces or in the products thereof.

A few of the methods devised, with the objections to them, are the following:

1. The tuberculin test and its modifications by Koch and others. In this test, filtered or centrifugalized cultures of tubercle bacilli in glycerin bouillon are injected into the patient, and on the following day a febrile reaction occurs in case tuberculosis exists. Sometimes dead tubercle bacilli are used; at other times attempts are made to remove the bacilli from the living cultures by the centrifuge or filter. The chief objections to this method are:

a. It can not be used (according to Koch and his school) in cases in which the temperature rises above 100 F., because the febrile reaction is not sufficiently evident and because harmful results are frequent in these cases.

b. The reaction occurs in latent and practically healed cases, and is said by many, both in these as well as in other mild cases, frequently to cause exacerbations of the disease when not acutely active. It is said very often to change chronic benign forms to acute and virulent ones.

c. Instances have been reported of the production of localized and later of general tuberculosis following the inoculation with tuberculin. Even in the cases of Koch's latest product, "Neutuberculin,"[1] virulent living tubercle bacilli were found in the fluid by Thellung,[2] and rabbits and guinea-pigs were infected.

d. Not all cases react, in which, according to Koch, the use of tuberculin is indicated. It is important to note, too, that the reaction may occur in healed cases and thus may create the impression that the patient is suffering from tuberculosis when the disease in reality has been overcome.[3]

2. Still more unsatisfactory than the use of tuberculin are substitutes for it; of these there have been many. Originally human and animal blood sera were advocated; later artificial blood sera (in which only the inorganic elements of the blood were used), and finally a simple physiologic solution of sodium chlorid.[4]

All of these later methods have been proven less reliable than the use of tuberculin and are subject to all of the same criticisms except the actual introduction of tubercle bacilli. Although apparently harmless, they have also been accused of stimulating latent foci to activity and of causing chronic cases to pursue a more acute course. Their use has, therefore, been generally abandoned.

3. Absolutely harmless, but extremely limited in its field of application, is the injection of animals with supposedly tuberculous products. The method is, however, slow in results; it is not certain and can not always be employed, because necessary materials can not be obtained. In cases where mixed infections have occurred this means can not be used at all, as the animals may die before any evidence of tuberculosis manifests itself.

4. Sometimes tubercle bacilli undoubtedly occur in the sputum and other products, but can not be discovered on account of their rarity. In such cases, e. g., in suspected pulmonary, intestinal or genitourinary tuberculosis, the growth of tubercle bacilli from the products of the processes they induce would be an ideal method of diagnosis, if practicable. Many have devised means of hastening the development of the bacilli under such conditions. The technic, however, is extremely difficult, and the results, up to the present time, have been unsatisfactory. No attempt will be made here to enumerate the endless varieties of culture media suggested for this purpose. It will be sufficient to mention the most promising, that of Hesse,[5] endorsed by some,[6-7] condemned by others.[8]

The great difficulties associated with cultural methods can be appreciated only by one who has attempted to isolate tubercle bacilli from or even to find them in a mixed culture. I have carried out in twenty cases the measures recommended by Hesse and Jochmann. In five the increase in numbers of tubercle bacilli was considerable, but the number in the original smear preparations was also great. The organisms never seem to multiply greatly unless a large number is used for the first implantation. Up to the present time but few if any cases have been reported in which the diagnosis has been made by the use of cultural methods; and my experience does not create confidence in its practicability.

5. Little can be said at present regarding the merits and demerits of "cytodiagnosis," i. e., the diagnosis of the nature of effusions by the determination of the cells therein contained. Though considerable emphasis has been laid on it by certain French clinicians, it has not been extensively used; many unsatisfactory results have been published and its field of usefulness must necessarily be limited to the study of exudates.*

THE AGGLUTINATION REACTION.

The method of Arloing and Courmont has been claimed to be fully as satisfactory as any of the above and free from any dangers. Nor has its application any limitations—effusions of blood can be used with equal readiness and practically the same results. The only things required for its execution are proper homogeneous cultures of tubercle bacilli and their mixture with blood or other serum, as by the Gruber-Widal method for the diagnosis of typhoid fever.

TECHNIC.[9]

a. Preparation of Cultures.—In the first place, cultures of human tubercle bacilli are grown on potatoes. These potatoes should be of such a character that they do not turn brown on boiling and should readily give up starch granules from the cut surface. They are boiled, put into potato tubes, in the bulb of which is placed enough of a 6 per cent. solution of glycerin in water to touch the lower edge of the potato. They are then put in the autoclave at 111 to 115 C. for the shortest possible time required to render them sterile (about 45 minutes). "Inoculate one of the surfaces of the potato and put the tube in an incubator at 38 to 39 and inclining it at such an angle that the inoculated surface points up and the glycerized water bathes the lower extremity of the slice." Every other day the tube should be tipped so that the colonies are gently immersed in the fluid. As a result of this procedure a luxuriant growth is obtained, which differs from the ordinary growth in being soft and easily completely broken up by stirring in a small mortar or touching with a glass rod. From these growths subcultures are made into the bouillon which is used for diagnosis. To give the best results, this bouillon should be made from beef or veal with 1 per cent. of peptone and 6 per cent. of glycerin. In these proportions the bouillon, while not producing the most luxuriant cultures, furnishes those with the greatest agglutinability.

The object of Arloing and Courmont in devising this elaborate and difficult technic, was to obtain cultures in which the tubercle bacilli were distinct, unclumped and motile. The potatoes are used in the designated way to accustom the organism to liquid surroundings, as well as to obtain soft and easily separable growths. The bacilli when transplanted are preserved distinct, while multiplying in the bouillon, by daily agitation. In this manner we obtain "homogeneous" cultures. An "homogeneous" culture is one which is more or less cloudy or turbid, contains very little or no sediment and in which the bacilli are found isolated, or at any rate not in large clumps. Usually the presence of some small clumps can not be avoided. It is advised to use for the bouillon subcultures cylindrical, i. e., flat-bottomed test tubes, because in these the cultures can be more efficiently agitated.

As a result of this technic Arloing[9] describes the organism as motile, isolated, straight or slightly curved, often granular, and as a little larger than the bacilli in tissues and as acid proof. Some observers have stated that the degree of motility is equal to that of the *Bacillus typhosus*, but usually the motion is said to be slow, but distinctly progressive. However strange the motility of the tubercle bacillus may seem, some who have worked independently of the Lyon school and with other culture media have made similar observations.[10] Branching forms have been described a few times as a consequence of this method of growth. In my experience they have been especially frequent.

Buard and others[11] state that it is preferable to transfer growths from bouillon to bouillon. After a year of such transplantation Buard believes to have found that (*a*) the cultures grow more rapidly; (*b*) the bacilli are more motile, i. e., the motility is proportionate to the rapidity of growth; (*c*) clumps are less numerous, and (*d*) the bacilli are longer and more slender. The same author prefers the use of carrots to that of potatoes for the initial growth. The method of transference from bouillon to bouillon has proven unsatisfactory in my hands, inasmuch as it has never been possible to grow many bacilli beyond the fourth generation. Nor has it at any time been possible to find more than an active Brownian motion in the hanging-drop preparation. Koch[2] at one time expressed doubts as to the identity of the bacillus described by Arloing and Courmont with his.

b. Use and Preservation of the Cultures.—The bouillon culture should be used for the reaction between the ninth and the fifteenth day of its growth, preferably not later than the 12th. Previous to this it should be shaken thoroughly at least once, better twice, daily. Before the eighth day not enough bacilli are present. After the fifteenth day agglutination with serum is lessened, while on the other hand there is some danger of autoagglutination, i. e., clumping occurs in the culture without the addition of any substance and in spite of most careful agitation.* To preserve the agglutinative power intact, several methods have been devised and are necessary, because the amount of labor required for a single reaction would be enormous if the fluid could not be preserved "homogeneous" for some time. After a culture has proven efficient by testing with a known serum, it may be kept in a good condition for two weeks by any of the following methods: 1. One part formalin to 400 to 600 culture. 2. Carbolic acid in the same proportion. 3. Culture placed in a cold, dark place, as in an icebox. Preferably method 1 or 2 should be combined with 3.[12] More or less precipitation always occurs on standing, and only the supernatant fluid should be used for the tests.

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* *Cytodiagnosis* has been extensively studied in France by Widal, Sicard, Ravaut and many others. A predominance of lymphocytes in the exudate and an absence of endothelial cells "is the formula for an idiopathic, i. e., tuberculous pleurisy." The new membrane is said to prevent the desquamation of endothelial cells. In other forms of inflammation of serous membranes, endothelial cells and polymorphonocular leucocytes predominate; lymphocytes are relatively few (Widal and Ravaut: Gaz. des Hôpitaux, vol. xxii, No. 30). Arloing and Courmont and their school have used this method as one of their controls in the determination of results and find it valuable.

* *This corresponds* in some respects to the occurrence of autoagglutination in older typhoid cultures as described by Savage, Jour. of Path. and Bact., 1901, vol. vii, pp. 388-399.

c. The Reaction.—To obtain the reaction a perfectly clear serum—blood serum, or inflammatory or simple effusion—is mixed with the culture fluid in varying proportions from 1:3 to 1:50. Preferably a 2 c.cm. test tube is used in which 1, 2, 3, or 4 drops of serum are mixed with bouillon in amounts sufficient to produce the proper ratios. The tubes are inclined at an angle of 45 degrees and allowed to stand in an incubator for from 2 to 6 hours.[13] They are examined at intervals, both with the unaided eye and under the microscope. To the unaided eye the fluid, providing the reaction be positive, should appear less turbid than the control, while a flocculent precipitate appears on the bottom or sides of the tube. The tubes should be examined in a bright light against a dark background.[14] Examined in the hanging-drop preparation the bacilli should appear clumped; not so in the control. Many and varying opinions have been expressed as to the relative merits of the microscopic and macroscopic tests, some holding the one,[14] some the other[15] of prime importance. Both should be used; in the large majority of cases the results are the same; in a few differences are found.

Several difficulties and sources of error present themselves with especial frequency in judging whether or not a positive reaction has taken place. The culture may not have been sufficiently turbid on account of the deficient growth of the bacteria to enable one to decide very readily whether it has cleared to a marked degree in the given time. The reaction can not compare in its sharpness, as a rule, to that seen in the Gruber-Widal reaction. In the examination of the sediment larger clumps must be distinguished from the light flocculent precipitate produced by the reaction, for often, in spite of the most painstaking technic, larger masses of tubercle bacilli may appear in the fluid. Moreover, foreign bodies, such as cotton and dust, may occur. When perfectly fresh serous fluids are used, especially inflammatory exudates of high specific gravity, the precipitation of some fibrin is of very frequent occurrence and must not be confused with clumps of tubercle bacilli. In the microscopic examination, similar precautions must be taken. Sometimes it is impossible to say whether one sees bacilli or extraneous matter. In such cases it is advisable to fix and stain the hanging-drop. By this procedure one is often surprised at finding very few bacilli in a drop, which, in the unstained specimen, appeared to be loaded with them.

MODIFICATIONS IN THE TECHNIC.

The most important modifications in the technic as originally suggested are those of E. Romberg[16] and Robert Koch. Romberg's medium is prepared by the action of 1.5 per cent. NaOH on dried and macerated tubercle bacilli, which are then neutralized by acetic acid. Finally an emulsion is made, which is used for the reaction. This becomes clear when mixed with a serum in the course of 40 to 44 hours. The changes occurring in the second half of the second day are of no diagnostic significance. The microscopic test is of less value than the macroscopic. In the hanging drop small bodies appear in active motion for hours unless an agglutinating serum is added.

Koch's method is essentially the same. Any culture derived from a liquid medium is dried on filter paper, rubbed up in a mortar and diluted 100 times with n/50 NaOH. It is then centrifugalized and the precipitate removed, rendered less alkaline by weak hydrochloric acid and finally diluted with 0.5 per cent. aqueous carbolic acid and 0.85 per cent. NaCl until the original culture has been diluted 3,000 times. The fluid so prepared, it is claimed, is more delicate in its reactions, more easily made and keeps better than the Arloing and Courmont. It is an opalescent liquid and becomes perfectly clear with a positive reaction. Koch recommends cupping as a means of obtaining serum; Arloing and Courmont prefer removal of blood by venipuncture and separation of the corpuscles by centrifugation or clotting.

Romberg's method has been little used; that of Koch seems to have no special advantages[17] and offers greater opportunities for infection of the worker.

RESULTS.

In the newborn there is no reaction in any dilution, nor is there in the very young who have been free from disease.[11,18] The serum of guinea-pigs, rabbits and calves in good health never reacts in as high proportion as one part of serum to five of culture. That of dogs, goats and oxen normally reacts, in this dilution, often higher.[19] From these observations it has been concluded that animals, which are resistant to tuberculosis, acquire sera exhibiting the highest agglutinative powers. The serum of healthy adults may or may not cause agglutination; also that of clinically non-tuberculous patients. In most of these on whom autopsies have been performed latent or healed tuberculous foci have been detected, often, however, only after most painstaking search. The best reactions occur in those cases which are most resistant. The acute cases and those in whom marked cachexia has developed frequently fail to react. Rothamel,[20] whose especial study was the sero-reaction in twenty advanced cases of tuberculosis, obtained no reaction whatever in 30 per cent. of the cases, and in 25 per cent. only at 1:5, which is not better than that frequently obtained in the non-tuberculous subject. This agrees quite closely with the results of Arloing and Courmont and others.[21] On the other hand, those cases in which the symptoms are mild or nil and which progress to rapid recovery, agglutinate the homogeneous cultures in high ratios, i. e., at 1:15-50. The agglutinative power increases with the tendency to recover. The cases which succumb without a struggle do not produce an antitoxin (?) and their serum has no agglutinative properties. Courmont compares this phenomenon to that observed by Tchistowitch and Epiphanoff[22] and himself[23] in cases of typhoid fever. Courmont found that in this disease the Gruber-Widal reaction in mild or moderate cases occurred on the average in dilutions of 1:90. The maximum agglutinative power was never simultaneous with the maximum of symptoms, but almost always appeared at the time of defervescence or even in the post-febrile period. On the other hand, in the more severe cases, the dilution could not, as a rule, be so high; the maximum fluctuated from time to time and became decidedly less just before death. This author even believed that he was justified in drawing some conclusions from these observations regarding the prognosis and the probability of relapse. He believes that the agglutinating reaction in typhoid fever is inversely proportionate to the severity of the case.

On the whole, the reactions of sera derived from effusions into the serous cavities prove nearly as satisfactory for tests as blood serum.[24] Non-tuberculous effusions in tuberculous patients are said not to develop agglutinins, while those originating from tuberculous processes possess as great or even greater powers than the blood serum of the same patient. The results of Romber,[16,18] Donath,[25] Kazarinoff,[26] Mongour and

Buard[11,15,27] Dubard,[28] Rothamel,[20] Clement,[29] Rumpf and Guinard,[17] Ivanov,[30] Hawthorn[14] and Bendix[31] agree in all essentials with those of Arloing and Courmont, although not all draw the same conclusions as to the value of the test for diagnostic purposes. It will, therefore, be sufficient to illustrate the nature of the results by a single series of cases reported by Arloing and Courmont. Results under 1:5 or occurring after the allotted time are considered negative.

362 CASES IN WHICH BLOOD SERUM WAS EMPLOYED.

	Pos.	Neg.
a. Clinically tuberculous (191)......	168 (87.9%)	23 (12.1%)
b. Clinically non-tuberculous (130)..	45 (34.6%)	85 (65.4%)
c. Healthy individuals (41)..........	11 (26.8%)	30 (73.2%)

CASES IN WHICH SEROUS EFFUSIONS WERE USED.

	Pos.	Neg.
a. Tuberc. pleuritic effusions (31)......................	23	8
b. Pleur. of doubtful origin (16)......................	13	3
c. Hydrothorax (non-tuberc.) (11)......................	0	11
d. Tuberculous ascites (13)......................	11	2
e. Non-tuberc. ascites (20)......................	0	20
f. Tubercul. meningitis......................	..	..

In children all negative. In adults two positive.

Many hundreds of cases have been reported by various observers, and most of them have tables of a nature similar to the above. It may be of interest to compare with these the results of the use of tuberculin as reported by Max Beck. His extensive work with patients of all varieties should give us some notion of the prevalence of undiagnosed tuberculosis. Altogether 2,508 persons were given tuberculin. Of these 1,525, or 60.9 per cent. reacted positively. Of these, however, only 371 gave any clinical evidence of tuberculosis, while the rest, 1,154, or 46 per cent. of all tested, clinically were free. Judging from the results of extensive comparisons between the reactions to tuberculin and postmortem examinations by E. France (quoted by Koch) and numerous veterinarians, little doubt exists that most or all of this 46 per cent. had latent or healed tuberculosis. This figure is not far from that obtained by most of those who have used the serum reaction for the clinically unaffected. (Romberg's reactions for the "non-tuberculous" were 62.7 per cent.) These facts give us a reason why so many apparently normal adults respond to the serum test.

Romberg calls attention to the work of Nägeli,[32] whose study of 500 bodies with a view to discovering tuberculous lesions gives us material for comparison. A single series of cases is here cited:

Age.	Active Latent. Per Cent.	Doubtful. Per Cent.	Inactive Latent. Per Cent.	Total. Per Cent.
18-30	62.0	5.0	33.0	67.0
30-40	42.0	16.0	42.0	58.0
40-50	29.0	18.0	53.0	47.0
50-60	25.0	17.5	57.5	42.5
60-70	27.0	17.0	56.0	44.0
70-80	24.0	21.0	55.0	45.0

The total is made up of those cases which are latent but not healed and those which are doubtful, i. e., those in which it is not possible to judge from the anatomical findings whether or not the process had terminated. Romberg believes that all of these cases react to the serum test. (The above table does not include any but latent cases.) Evidently not all tuberculous individuals react, inasmuch as Nägeli finds some evidence of tuberculosis in practically every adult body (98 per cent.). In children, on the contrary, Nägeli found in 88 necropsies only 15 with tuberculous lesions; most of these were over 14 years of age. In 11 cases this disease caused death. The rarity of a positive serum reaction in a child, therefore, may be interpreted as being due to the scarcity of benign forms of tuberculosis in these years.

A very interesting and important observation in regard to the agglutination of tubercle bacilli was made by Arloing.[33] He found that injection of certain chemicals (other than tuberculin) produced in animals agglutinating sera. Such chemicals are eucalyptol, guaiacol, creosote and mercuric chlorid. The serum reaction produced by these is not so powerful as that produced by the injection of tuberculin, but agglutination occurs in the average dilution of 1:10. Dubard[34] obtained similar results. Not only did the latter find that sera produce precipitation of bacilli, but that even aqueous extracts of tuberculous tissue, of healthy livers and solutions of various chemicals cause sedimentation.[35]

EFFECTS OF AGGLUTINATION ON THE BACILLI.

These have been studied at length by F. Arloing.[36] He sums up the changes in the bacilli produced by the agglutination as follows:

1. There is no change in the morphology or staining characteristics.

2. Contact with agglutinating sera for 5, 10 or 24 hours does not produce bacteriolysis or bacterial death.

3. On the contrary, after 5 to 10 hours of contact the growth in liquid media is considerably improved.

In addition, the motility is found to be decreased or absent and the bacilli lie in clumps of various dimensions.

These statements are not in accord with those of Courmont,[21c,g] who states specifically that tuberculous effusions are decidedly bactericidal. For my part, I have been unable to obtain growths from such bacilli, but experimental inoculation into animals invariably produced tuberculosis. It is of considerable significance that human tubercle bacilli are agglutinated by the serum of all varieties of animal tuberculosis. The converse is no less true. Not only that, but the same effects have been noted by Koch[2] in similar preparations of many other acid-proof bacilli, which are non-pathogenic for man and other mammalia, such as the butter-bacillus (Rabinowitch), the grass bacilli of Korn, the timothy bacillus, the bacillus of fish tuberculosis, etc.

PERSONAL OBSERVATIONS.

My own experiments are limited to 52 cases, in some of which the tests were repeated from time to time, and in which bouillon suspensions of various ages were used.* As a rule, if the suspension was not more than 18 days old no difference in the results was noted. The reactions did not vary after some time had elapsed except in a few instances, which shall be noted below. In 16 cases the blood serum was employed, in 36 pathologic effusions into serous cavities. The tests were as carefully controlled as possible by clinical data, in some cases by tuberculin and in many by injections of effusions into guinea-pigs. In every case a control tube was used, which was compared with those in which sera were being tested. Dilutions varying from 1:15 to 1:20 were used in almost every experiment. In the following tables the positive reactions are given in their greatest, the negative in the least dilution tested.

In brief, the following results were obtained:

BLOOD SERA (16).

Obtained from children suffering from scarlet fever, but otherwise healthy. Cases 4, 5, 6, 8 (14), 12, 16. All negative at 4:15.

Adults suffering from scarlet fever, otherwise apparently healthy. Case 11.—Young man; neg. at 4:15. Case 10.—Positive at 1:15. Case 15.—Positive at 1:20.

In none of these cases was there any clinical tuberculosis.

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* The original culture of tubercle bacilli used in these experiments was kindly sent to the laboratory of Rush Medical College by Dr. Trudeau of Saranac Lake, N. Y. The culture was isolated directly from the sputum of a case of acute phthisis by Hesse's method. It had been grown on artificial media for about six months and had never been passed through animals.

Blood from case of puerperal hemorrhage. Case 20.—Neg. at 1:5.
Man. Case 22.—Healthy; neg. at 1:5.
Man. Case 47.—Healthy; neg. at 4:15.
Dog. Case 20.—Healthy; pos. at 1:5.
Case of organic heart disease. Case 26.—Neg. at 4:15. Clinically and at autopsy no active tuberculosis.
Typhoid fever and miliary tuberculosis in young negress; positive Gruber-Widal reaction. Fever two months. Progressive lung changes. Death three months from onset. Pos. at 1:15.
Miliary tuberculosis (autopsy). Case 21.—Positive feebly at 1:10 two to three weeks before death.

PLEURAL EFFUSIONS.

1. Probably or positively tuberculous.
    Case 1.—Pos. at 1:10 in 2 hours.
    Case 2.—Pos. at 1:10 in 4 hours.
    Pos. at 1:20 in 16 hours.
    Case 27.—Pos. at 2:15 in 12 hours.
    Inoculated g.-pig tuberculous.
    Case 32.—Pos. at 1:5 in 12 hours. Greater dilutions negative. Well nourished; one previous attack.
    Case 51.—Pos. at 2:15.
    Case 38.—Pos. at 2:15 up to two days before death; tuberculosis at autopsy.
    Case 31.—Neg. at 1:5. Repeated attacks; emaciation, etc. No bacilli in sputum.
    Case 53.—Neg. at 4:15.
    Case 55.—Neg. at 3:15.
2. Non-tuberculous.
    Case 3.—Nephritis. Neg. in 10 hours.
    Case 18.—Post-pneumonic empyema. Neg. at 1:5. Pus was allowed to settle for three days; then formalinized at 1:20 and allowed to stand one day.
    Case 24.—Organic heart disease. Neg.
    Case 28.—Organic heart disease. Neg.
    Case 46.—Acute pleurisy following exposure; first attack. Neg. at 1:5.
    Case 33.—Empyema pus, post-pneumonic. Pos. at 2:15 in 12 hours; subjected to same conditions as Case 18.
    Case 48.—Pyemia. Pos. at 1:15. General inflammatory conditions: pericordium, pleura, etc. *Staphyl. pyog. aureus* isolated *from blood.*

ABDOMINAL EFFUSIONS.

1. Tuberculous.
    Case 36 (42).—Good response to tuberculin. Pos. at 1:7½.
    Case 37 (44).—Pos. at 2:15, 2 months before death. Pos. at 1:5, 2 weeks before death. No good response to tuberculin. Pig died in 45 days of miliary tuberculosis.
    Case 40.—Neg. at 1:5. Hyperplastic tuberculosis of lymph glands, tuberculous peritonitis, etc. *Necropsy.* Fluid obtained on day before death.
2. *Non-tuberculous.*
    Case 9 (13).—Cirrhosis. Neg. at 1:5; second test feebly pos. at 1:5.
    Case 23.—Cirrhosis. Neg. at 3:15. (? at 4:15.)
    Case 54.—Nephritis. Neg. at 1:5.
    Case 39.—Splenic anemia. Neg. at 1:5.
    Case 56. Probable cirrhosis. Neg. at 1:5.
    Case 34.—Typical cirrhosis. Pos. at 1:15.
    Case 50.—Cirrhosis. Pos. at 1:7½ macroscop. Neg. microscopically.
    Case 49.—Cirrhosis. Pos. at 1:5; neg. at 1:7½.

KNEE-JOINT EFFUSIONS.

1. Tuberculous.
    Case 7.—Pos. at 1:20 in 4 hours.
    Case 30.—Pos. at 1:5; Neg. at 1:7½.
2. Non-tuberculous.
    Case 19.—Gonorrheal arthritis. Neg. at 1:5.
    Case 43 (46b).—Multiple arthritis, probably rheumatic. Neg. at 1:5.

MENINGEAL FLUIDS (ALL FROM ADULTS).

1. Tuberculous.
    Case 17.—Pos. at 1:5. Confirmed by necropsy.
    Case 41.—Pos. at 1:15 on day before death. Diagnosis confirmed by autopsy.
2. Non-tuberculous.
    Case 45.—Typhoid. Pos. at 1:5. *No active or latent* tuberculosis found at necropsy.

HYDROCELE FLUIDS.

1. Non-tuberculous.
    Case 25.—Neg. at 1:5. No reaction in guinea-pig after injection of 15 cmm.
    Case 36.—Neg. Careful search made for tubercles in excised sac.

Summing up these experiments we ascertain the following:

BLOOD SERA.

	Pos.	Neg.	Pos.	Neg.
Non-tuberculous	2	12	15%	85%
Tuberculous	2	..	100	..

PATHOLOGIC EFFUSIONS.

	Pos.	Neg.	Pos.	Neg.
Non-tuberculous	6	14	30%	70%
Tuberculous	12	4	73%	27%

It must be born in mind that except in cases on which autopsies are performed it is impossible to say that latent tuberculosis is not present. The number of tests here employed is much too small to be in itself of any value, but the results agree quite closely with those of the majority of workers.

Very different are the statistics of some others, notably Beck and Rabinowitch,[37] C. Fränkel,[38] Koch,[2] de Grazia[39] and others.[34] The work of Beck and Rabinowitch[40] is of especial value on account of comparative tests with tuberculin and the extensive postmortem examination of tested cattle. Although it has been claimed by Arloing and *Courmont* that there must have been faults in the technic, it is not easy to understand how such gross errors were made. The cultures which they used for their experiments are stated to be identical with those sent to them by Arloing and Courmont for comparative tests. They were unable to discover motility in either their own cultures or in those of the French observers. The following are, in brief, their results:

1. In 19 healthy cattle, 12 were pos. at 1:5.
2. In 4 sick non-tuberculous, 3 were pos.
3. In 17 cattle with incipient tbs., 6 were neg. at 1:5.
4. In 22 moderately advanced tbs., 2 were neg.; 6 were pos. only at 1:5.
5. In 16 advanced cases, 1 was neg.; 4 reacted only at 1:5.
6. In cows inoculated with tuberculosis: 3 were neg.; 5 were pos. at 1:5 only.

In considering these figures it must be remembered that the normal bovine serum has been found to react at *1:5 and that for this reason* a reaction at 1:5 should not be considered positive.

In 73 humans the same variations appeared:

1. Tuberculous (phthisis).
    Incipient (17), 6 pos.
    Advanced (16), 4 pos.
    Doubtful (clinically), but reacting to tuberculin, of 5, 1 pos. at 1:5.
    Lupus (2), 1 pos.
    Nephritis and healed tbs. (1), 1 pos.
    Meningitis (1), 0 pos.
2. Non-tuberculous (31).
    10 pos.; of these some were tested with tuberculin with neg. results.

The same observers find that the sera of some animals, e. g., dog, ass and goat, *agglutinate the test fluid with* great regularity.* Koch, in whose laboratory the above results were obtained, and Fränkel *confirm this work.*

CAUSES OF REACTION.

It is repeatedly asserted by Arloing and Courmont that the cause of the agglutination of tubercle bacilli lies in the formation of an antitoxin which circulates in the blood and appears in the body fluids elsewhere. *Comparison is made frequently* to the antitoxin produced in the course of typhoid fever. In mild cases of tuberculosis, *which go on to a rapid recovery*, this antitoxin is said to be produced in large amounts, while in those which are rapidly fatal it is assumed that the time is insufficient for its production. No rational explanation is offered for its disappearance before death in cases, which extend over a long period and finally produce death chiefly *from cachexia. It* has always been the contention of Koch and his school that the limitation of tuberculous processes is solely a result of the local reactions of the tissue and entirely independent of any systemic changes. There *is no evidence in the large* majority of cases that the bacilli ever enter the blood stream. The very exhaustive work of Trudeau and Baldwin[41] in attempting to obtain an antitoxin from animals injected with both virulent and *non-virulent cultures* of tubercle bacilli gave entirely negative results. Numerous other investigators have arrived at the same conclusion, viz., that in tuberculosis no antitoxin is formed. Recent investigations show, however, that agglutinins and antitoxins may be formed independently of one another.

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* Ficker[40] explains the wide discrepancies between the results of Arloing and Courmont and those of Beck and Rabinowitch by the age of the cultures used. A. and C. usually employed growths from 9 to 12 days old, B. and R. cultures 14 days old. Ficker points out that inasmuch as the agglutinating material is used up in the reaction, testing fluids very rich in bacilli are not necessarily completely cleared. Therefore sera of slight agglutinating power *may* not produce reactions in cases in which very turbid homogeneous cultures are employed. He also finds that the number of bacilli in a culture after 14 days is much greater than after a *development* of only 10 days.

There is good foundation for believing that the blood serum is so altered at times that precipitation of the tubercle bacillus occurs when it is added to liquid cultures of this organism. Whether or not this property is a specific result of the action of the tubercle bacillus is doubtful. According to Arloing agglutination may be produced by the blood of animals which have been injected with certain chemicals. It also may occur to a considerable extent with serums of many normal animals. On the other hand, similarly prepared cultures of practically all of the known acid-proof bacilli react in the same way to agglutinating sera. But it is extremely doubtful whether these organisms have anything in common beyond their reaction to acids and possibly the presence in them of certain fats.[42] The foregoing considerations warrant the conclusion that the agglutination of tubercle bacilli and the presence of tuberculosis are not necessarily related. Changes which are too slight to be detected by our present methods of chemical analysis may occur in the blood after removal from the body, which render it more easily capable of causing the precipitation of bacilli.* A fluid mixture which spoils even in the dark and in the cold in two weeks after preparation, must be so delicate that even very slight changes in the blood sera might affect it. Many organisms are clumped by ordinary blood in the lowest dilution (1:5) used in this test. In brief, we obtain the reaction in cases when tuberculosis plays no rôle; whether or not tuberculosis produces the agglutinating sera in many cases, remains an open question.

A casual glance is sufficient to show the many stumbling blocks in the way of arriving at a decision of the significance of the reactions. The presence of agglutinating serum in 30 per cent. (Arloing and Courmont) to 62.7 per cent. (Romberg) of those who never have any clinical evidence of tuberculosis must always be confusing to one who attempts by this method to determine the nature of the disease in question. A negative result may mean: entire absence of tuberculous lesions, healed tuberculosis, acute tuberculosis or tuberculous cachexia; and (in the judgment of those who have had the most favorable results) even some of the relatively mild cases do not respond. A positive agglutinative reaction may represent a normal adult individual (according to Nägeli a normal adult individual has some tuberculosis); it may stand for a highly resistant organism struggling against the disease, or it may represent the 70 per cent. of advanced or acute cases of tuberculosis in which the reaction occurs. It is especially in the acute virulent forms that we stand in need of a rapid and efficient means of diagnosis, and it is in these forms that the sero-reaction is, even in the eyes of its most ardent advocates, least trustworthy.

Practically only the newborn never have elements in their sera under normal conditions which cause the precipitation of tubercle bacilli. Romberg concludes from this that this measure should be especially valuable in the young. But, in the young, tuberculosis usually assumes an acute form; hence also under these conditions the serum reaction may leave us in the lurch.

CONCLUSIONS.

1. Under various conditions animal sera agglutinate homogeneous cultures of human tubercle bacilli in liquid media.

2. Such sera may be obtained from the human or animal body without the presence in it of the bacillus tuberculosis.

3. It is doubtful whether the agglutinative powers are ever due to the specific action of the bacillus tuberculosis.

4. The presence or absence in the adult human blood serum of agglutinative properties for tubercle bacilli is no decisive evidence of the presence or absence of tuberculous lesions in the body.

It gives me great pleasure to thank Professor Hektoen for his assistance and encouragement in this work.

BIBLIOGRAPHY.

1. Deutsche med. Wochenschrift, 1901, vol. xxvii, No. 48.
2. Experimenteller Beitrag zur Frage der Agglutination der Tuberkel bacillen und zur behandlung mit Neutuberkulin Koch. Centralbl. f. Bakt., 1902, vol. xxxii, No. 1.
3. For careful statistics of his own on the use of tuberculin and a short résumé of the work of others, see M. Beck, Deutsche med. Wochenschrift, 1899, vol. xxv, No. 9, p. 137.
4. Several such methods may be found advocated in papers read before the Congress for Tuberculosis at Paris in 1898.
5. Zeitsch. f. Hyg. u. Infekt., 1901, vol. xxxi, p. 502-6. Centralbl. f. Bakt., vol. xxviii, 8-9.
6. Fraenkel, C.: Hygienische Rundschau, 1900, vol. x, No. 13, p. 617-630.
7. Jochmann: Muench. med. Wochenschr., 1900, vol. xlvii, No. 22, p. 782.
8. Hilarius Menzi: Zeitschr. f. Hyg., 1902, vol. xxxix, No. 3, p. 407. Martin Ficker: C. f. Bakt., 1900, vol. xxvii, 14-15. Roemer: Ibid., 1900, vol. xxvii, 10-21.
9. Arloing: 1898, Comptes rend. de l'Acad. des Sciences, v, 126, p. 1319. Arloing and Courmont: Dec. 1, 1900, Gaz. des Hôp., p. 1467. C. r. de l'Acad. des Sciences, Aug. 8, 1898, vol. cxxvii, No. 6, p. 312.
10. Ferran: Acad. des Sc., October, 1897. Semaine Medicale, 1897, No. 48, p. 381. Wiener klin. Wochenschrift, 1898, p. 679. Schumowski: C. f. Bakt., 1898, vol. xxiii, p. 838.
11. Buard: These de Bordeaux, De la sero-reaction tuberculeuse -etude speciale chez l'enfant, 1900.
12. Arloing and Courmont: Soc. de Biol., 1901, vol. liii, p. 1095. (These methods are analogous to those suggested by Ehrlich and others for the preservation of typhoid cultures for agglutinative reactions.)
13. Mongour and Buard: Soc. de Biol., ii, 1899, p. 5614. Arloing and Courmont (Acad. des Sc., vol. cxxvii, No. 12, p. 425 et seq.) advised examination for 24 hours, but M. and B. found that any serum might react after such a period and A. and C. later accepted their modification.
14. Hawthorn: Soc. de Biol., 1902, vol. liv, p. 632, finds that it is easier to see the precipitate by transmitted light. This has also been the author's experience.
15. Mongour and Buard: Soc. de Biol., 1899, No. 25, p. 656.
16. Deutsche med. Wochenschrift, 1901, vol. xxvii, Nos. 18 and 19.
17. Rumpf and Guinard: Deutsche med. Wochensch[illegible]ft, 1902, vol. xxviii, p. 131.
18. E. Romberg: Muenchner med. Woch., Jan. 21, 1902, vol. xlix, No. 3.
19. Arloing and Courmont: Journal de phys. et de path. gen., 1900, vol. ii, pp. 82-94.
20. These de Bordeaux, 1900.
21. Results of experiments in the various series of cases studied by Arloing and Courmont are to be found in the following: *a*, C. r. de l'Acad. des Sc., 1808, vol. cxxvi, pp. 1398-1401. *b*, Ibid., 1898, vol. cxxvi, pp. 1550-1553. *c*, C. r. h. de la Soc. de Biol., 1898, pp. 605-608. *d*, Arch. de med. exp. et d'anat. path., vol. xii, p. 697. *e*, Deutsche med. Woch., 1900, vol. xxvi, No. 48, p. 766. *f*. Bericht ü. d. Kongress z. Bekämpfung d. T., 1899, p. 229. *g*, Congre de Paris, 1898, p. 578, Ibid., 583. *h*, Presse medicale, June 1, 1898. *i*, Gaz. des Hôp., Dec. 1, 1900, vol. lxxiii, No. 137, p. 1467. *j*, Gaz. des Hôp., 1901, vol. lxxiv, No. 94. *k*, C. r. de la soc.-med. des hop. de Lyon, 1902, No. 3; Ref. C. f. Bakt., vol. xxxi, p. 699. *l*, Gaz. des Hôp., 1899, p. 58. *m*, London Congress, 1902. *n*, Zeitschrift f. Tuberkulose u. Heilstättenwesen, vol. i, No. 1. *o*, Ibid., vol. ii, No. 6. *p*, See reference 9.
22. Soc. des medicins russes de St. Petersbourgh, November, 1897.
23. Revue de medicine, 1900, pp. 317 sqq., 433 sqq.
24. Widal and Ravaut: Gaz. des Hôp., 1901, No. 94; also Hawthorn, Courmont and others, loc. cit.
25. Wiener klin. Rundschau, 1901, No. 41. Ref. C. f. Bakt., vol. xxxi, No. 1.
26. Roussky Vratch, 1902, vol. i, No. 1.
27. Jour. de phys. et de path. gén., 1900, p. 797. Soc. de biol., 1898, p. 1143.
28. Ibid., April 30, 1898. Also Congrès de Paris, 1898, p. 595.
29. Thèse de Lyon, 1900.
30. Nevruloguitchesski Vestnik, 1901, p. 849.
31. Deutsche med. Wochenschrift, 1900, vol xxvi, No. 14.
32. Virchow's Archiv, 1900, vol. clx, p. 426.
33. C. r. de l'Acad. des Sciences, 1898, vol. cxxvi.
34. Congres de Tuberculose, Paris, 1898, p. 595.
35. C. r. h. de la Soc. de Biol., April 30, 1898.
36. Province medicale, 1899, vol. iii, p. 399.
37. Zeitscher. f. Hyg. u. Infektsionskrankh., 1901, vol. xxxvii, p. 2. Deutsche med. Woch., 1900, vol. xxvi, No. 25.
38. Hygienische Rundschau, 1900, vol. x, No. 13.
39. Berl. klin. Woch., March 17 and 24, 1902. Also Gaz. degli Ospedali, Sept. 8, 1901.
40. Dieudonne: D. med. Militarärztl. Zeitschr., 1900. Ref. Zf. Tub. u. Heilst., 1901, vol. ii, p. 86. M. Ficker: Zf. Tub., 1901, vol. ii, No. 4, p. 321. Knopf: Zf. Tub., 1900, vol. i, No. 3, p. 187.
41. Amer. Jour. Med. Sc., December, 1898, and January, 1899.
42. Centralblatt f. allgem. Path., 1900, vol. ii, p. 97.

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* Cfr. A. Fischer: Z. f. Hyg., 1900, vol. xxxv, pp. 1-58. Die Empfindlichkeit der Bakterienzelle und das baktericide Serum.

THE TRANSMISSION OF YELLOW FEVER.*

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Several American observers have noted that during the yellow fever outbreaks mosquitoes were very numerous, among them Rush,[1] at Philadelphia in 1797; Dr. Weightman,[2] of the U. S. Army, at St. Augustine, Fla., in 1839; Dr. Wood,[3] at Centerville, Miss., in 1853. Dr. E. H. Barton[3] states "that at Clinton, La., in 1853, mosquitoes were uncommonly numerous night and day." At Trinity, La., in the same year, when sawdust was used to fill up low places in the streets, the disease was not propagated, though many cases were brought there and no precautions were used.[3] It is hardly necessary to note what the effect of this obliteration of puddles would be on the development of mosquitoes. Dr. Beyrenheidt[3] of Biloxi, Miss., in reporting a severe epidemic at that place in 1853, during which 533 cases and 111 deaths occurred in a population of 5,520, makes the interesting statement that "mosquitoes and fleas were very abundant." Dr. Bennett Dowler strongly urged drainage of the city of New Orleans, and spoke of the city and its environs as "mosquito lands."[4] La Roche[5] states that in 1793, during the epidemic in Philadelphia, "the narrow streets and alleys near the wharves, as, indeed, in many other parts, were in a foul state, and the gutters almost everywhere sadly neglected." In 1794 Rush and others ascribed the fever to exhalations from wharves, neglected gutters and stagnant ponds.[5] In 1797, during another outbreak in Philadelphia, the condition was practically the same; the Academy of Medicine called the attention of the governor to the putrid exhalations from the gutters, streets, ponds and marshy grounds of the neighborhood of the city.[5] While high temperature, low altitude and the presence of standing water are the conditions most favorable to the development of a yellow fever epidemic, there are numerous instances on record where the disease after introduction spread from house to house throughout the town in places where the general conditions of sanitation and drainage were good. This is now explained by the habits of the mosquito (*Stegomyia fasciata*), which breeds in standing water, in houses as well as out of doors. As a general rule, in ports where yellow fever epidemics first appear, the conditions are known to be favorable for the development of enormous numbers of mosquitoes.

A very interesting observation was made in 1839 in South Africa by Wm. Ferguson, then a surgeon in the South African corps, in regard to the extension of yellow fever from Sierra Leone (where it had been brought on vessels from the West Indies) to Gambia, Goree and Ascension, the subsequent ports of arrival of some of these infected vessels. After mentioning an unusually heavy accumulation of mud and filth in a pit at Ascension, which was said to have been the cause of the fever occurring after an unusually heavy fall of rain, he makes the following statement:[6] "It will be observed that at Ascension, at Goree and at Gambia, a period of three or four weeks always elapsed betwixt the landing of the sick and the epidemic outbreaking of the disease among the population, a degree of uniformity worthy of remark, whether the conclusions at which I have arrived (that the disease was carried to these places on infected vessels) be mistaken or not." These outbreaks were accompanied by black vomit and were undoubtedly yellow fever of imported origin.

Just sixty years later Carter[7] made a similar observation in the United States, shortening the period slightly and giving cases and data. In a later paper[8] he designates the interval between primary and secondary cases the period of "extrinsic incubation."

The known facts regarding the apparent non-contagiousness of the disease, the peculiar manner in which it has been seen to pass from one house to another without intercommunication of the inhabitants, and the numerous points of resemblance between yellow fever and malaria, led us to expect results from mosquito inoculations in yellow fever. After satisfying ourselves that *B. icteroides* (Sanarelli) was not to be considered, Drs. Reed, Lazear and myself, in consultation, decided that the mosquito theory had many facts to support it and could be promptly decided one way or the other. This leads us to a consideration of the mosquito theory of Finlay.

At the session of the Royal Academy of Sciences, Havana, Aug. 14, 1881, Finlay first gave to the world his memorable theory of the transmission of yellow fever by the mosquito, and reported five experiments, which are included in the accompanying table, comprising all of Finlay's and Delgado's positive cases published in 1891.[9]

Finlay believed[10] that the transfer of the specific agent of the disease from patient to non-immune was effected mechanically by the insect's proboscis,[14] and that the infection would be conveyed immediately if the insect chanced to bite a susceptible person a few moments after feeding on a patient in the proper stage of the disease.[11] He also thought that the graver forms of yellow fever might be produced by the bite of *Culex pungens*, because the insect ingested a larger amount of blood than stegomyia, and consequently a greater quantity of the virus would be retained on its proboscis (stylet).[11] He ventured the opinion that yellow fever was a sort of eruptive fever, and that the seat of the eruption was the endothelial lining of the blood vessels, and that the mosquito picked up the inoculable material from the interior of the blood vessels on its biting apparatus and transferred the same to the interior of the vessels of the person subsequently bitten.

In a later paper he assumes that the picking up of these germs by the proboscis of the mosquito is selective, because there is nothing to prove that other inoculable diseases have ever been so transmitted. From four culture experiments, in each of which the head and proboscis of a mosquito was dropped into a bouillon tube, he infers that the head and proboscis of the day mosquito possesses bactericidal properties for ordinary bacteria and fungi with the exception of a coccus, which was subsequently[12] claimed to be the specific agent of the disease.[13] The sting of the mosquito is suggested as the "intermediate host" necessary for some phase of development of disease germs.[14]

As late as 1899 Finlay mentions the isolation of the tetracoccus from culture media into which the heads and proboscides of contaminated mosquitoes had been dropped, as one of the three results of his experiments on yellow fever mosquitoes.

In a paper[13] published in 1895 he announced some very interesting results obtained with the "tetracoccus." A number of rabbits were inoculated intraperitoneally with cultures in bouillon; one of these cultures had been obtained from the head and proboscis of a mosquito by placing them in a tube of bouillon five days after the insect had been a yellow fever patient; the others came from the finger blood and milk of yellow fever patients.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. W. S. Thayer, J. M. Anders and Frank A. Jones.

All of the rabbits died; some of them showed infarcts of the kidneys, lungs and liver. A rabbit obtained from the country was placed in the stable where some of the other rabbits had been kept, and at the end of eight days it was found dead. The tetracoccus was obtained from its heart's blood.

Eleven days after the rabbits had been removed from the house (the stable is usually a part of the house in Havana) a Spanish wet nurse came to spend some time there, and on the third day following her arrival she was attacked with yellow fever. Mosquitoes had been unusually abundant in the house during the whole time the inoculated rabbits had been kept in it, and we are asked to keep this in mind, in view of the possible transmission of the disease from animals to man. We are told that the blood from the finger of this woman on the third day of her illness gave the "pale yellow tetracoccus," and the milk from her breast gave a "white tetracoccus," which proved fatal to a rabbit in fifteen days.[13]

While reading the accounts of these experiments one is constantly reminded of the pathogenic staphylococci. It is strongly suggested[13] that the rabbits died of yellow fever, and it is asserted that the experiments justified the assumption that the tetracoccus was the "specific germ of yellow fever."

TABLE 1.—MOSQUITO INOCULATIONS REPORTED BY FINLAY AND DELGADO IN THE ARCHIVES DE MEDICINE NAVALE, TOME 55, PARIS, 1891.

No. of Case.	No. of Patient.	Date of Contamination of Mosquito.	Date when the Patient was Bitten.	Period in Mosquito.	Date of Attack of Fever.	Period of Incubation.	Character of Attack.	Albuminuria?	REMARKS.
1	F. B. M. .	June 28, 1881 .	June 30, 1881 .	2 days	July 14, 1881. .	14 days	Mild .	Yes	Excessive period of incubation.
2	Aly. C. . .	July 16, 1881.	July 22, 1881 . .	6 "	July 27, 1881 .	5 "	Abortive	No . .	Insect bit Dr. Finlay July 20.
3	L. G. P. .	July 26, 1881 . .	July 29, 1881 . .	3 "	July 31, 1881 . .	2 "	Mild. . . .	No . .	Infection by mosquito excrement.
4	D. L. F. .	July 29, 1881 . .	July 31, 1881 . .	2 "	Aug. 5, 1881 . .	5 "	Abortive .	?. . .	Did not report himself sick. History of illness vague.
5	D. G. B. .	July 31, 1881 .	Aug. 2, 1881 . .	2 "	About Aug. 20, '81	18 "	Mild . . .	? . .	Excessive incubation period.[15]
8	J. B . . .	June 20, 1883 .	June 22, 1883. .	2 "	July 9, 1883 . .	17 "	. . . . . .	No . . No . .	Two mosquitoes used. Excessive incubation period. Resided in Havana.
9	P. U. . . .	Aug. 13 & 15. '83	Aug. 17, 1883 . .	. . .	Aug. 26, 1883 . .	9 "	. . . . .	No . .	Excessive period of incubation. Jesuit priest, lived at Marianao near Havana.
13	J. S	. . . .	Aug. 18, 1883 . .	. . .	Sept. 9, 1883 .	22 "	. . . . . .	No . .	Excessive period of incubation. Lived at Marianao. Moved to Havana six days before his attack.
28	H. Oz.. . .	. . . .	Sept 7, 1886 .	. . .	Sept. 23, 1886 .	16 "	Mild . . .		Excessive period of incubation.
32	J. P	. . . .	June 16. 1887 .		July 11, 1887 .	25 "	. . . . . .	Trace..	Excessive period of incubation.
42	P. Rem . .	. . . .	June 8 1888. .	. . .	July 1, 1888 .	23 "	. . . . . .	No . .	Excessive period of incubation.
55	P. Go . . .	Not stated	Aug. 17, 1889. .	.	Aug. 26, 1889. .	9 "	. . . . . .	No	Excessive period of incubation.
66	H. Ola. . .	Not stated .	Aug. 14, 1890 . .	.	Aug. 21, 1890. .	7 "	. . . . . .	No . .	Lived at a country residence near Havana.

The statement is also made in this paper that of one hundred presumably susceptible persons who had received the mosquito inoculation during the fourteen years previous, only three had subsequently died of yellow fever.[13]

I have been unable to find records of these one hundred cases in the library of the Surgeon-General's office, and submit those of which the data are accessible to me. As these include the cases on which Dr. Finlay's claim is based they will suffice for the purpose. The fifty-four negative cases are omitted.

Case 3 was bitten by a mosquito that had been fed on bloody excrement from another mosquito that had been found inside the mosquito net of a fatal case. The material was allowed to dry for twenty-seven days in the test tube and was then moistened with a little sugar and water to prepare it for feeding.[15] There is a marked difference between the method of procedure herein described and that given in 1901,[10] when Dr. Finlay said, "I applied a nocturnal mosquito and allowed it to fill itself from a case of yellow fever. After pricking the side of the insect's abdomen I mixed the blood which escaped with a drop of sterilized syrup and fed with it a fresh culex mosquito, and finally applied the latter to a third soldier (July 29). Two days later July 31, the soldier went to the hospital with a fever which was also recorded as "abortive yellow fever." This case (L. G. P.) was omitted from the paper published in 1881, as stated, but was included in 1891 in the report from which the cases here recorded are taken.

Case 4 is further discussed in English in a foot note on p. 368 of the Revista de la Asociacion Medico-Farmaceutica, Havana, February, 1902. (History of illness vague. Did not go to bed or report himself sick.) The first five cases were newly-arrived soldiers, stationed at Cabanas and who were brought to the city of Havana for examination once in every five days.

Case 9 is cited by Finlay[17] in refutation of our conclusion[18] that the mosquito is not capable of infecting until about twelve days or more have elapsed after it has bitten the patient.

Case 55 was a Spaniard, newly arrived, who lived at a country residence. At both attempts to inoculate him the mosquitoes failed to bite; nevertheless he was taken sick August 26. Another non-immune who occupied an adjoining room was taken sick with similar symptoms, a few days later. No further comment is necessary, except that the cases of the Army Commission and of Dr. Guiteras were kept under close observation and strict control. Nearly all of Dr. Finlay's cases were exposed to infection in the city of Havana. Only four of them come within the recognized periods of incubation, viz., Nos. 2, 3, 4 and 66. The first three of these were inoculated in Havana in July, 1881, during which month there were ninety deaths from yellow fever in that city alone. The last was inoculated in August, 1890. In that month sixty deaths from yellow fever are recorded for the city of Havana.

Finlay has published a great many conjectures and speculations in regard to yellow fever transmission. Some of these, such as the belief that the disease was transmitted by the mosquito, have been proven by our work, but not in accordance with his ideas. I can find no evidence that he has produced a single case of yellow fever by his inoculations. In the first place the mosquito is incapable of transmitting the disease in so short a period as two to five days after biting the patient. In the second place seven days must be placed as the extreme limit of incubation in the human being. Our longest period was between five and six days. Finlay conveniently puts the ordinary limit of yellow fever incubation between five and twenty-two days.[14] The efficiency of the five-day quarantine regulation proves that incubation in man certainly does not extend over six days, or seven at the extreme, and in the thirty experimental cases recorded by ourselves and Guiteras the former period has never been exceeded.

In a letter of Aug. 20, 1901, Dr. Finlay[10] states he was convinced that extension of the interval between the application of the mosquito to the patient, and subsequently to the non-immune, would develop a severe attack, such as he was anxious to avoid. One can sympathize with the humane feeling that prompted him to forego positive proof of his theory rather than run the risk of producing a severe attack, but it is a fact that on Aug. 22, 1901, two days later than the date of that etter, I saw Dr. Finlay apply to a non-immune two osquitoes that had been kept thirty-four days after conamination.[20]

TABLE 2.—NEGATIVE MOSQUITO INOCULATIONS OF THE ARMY COMMISSION.

Number.	Character of Attack and Number of Patients Bitten.	Day of Disease.	Interval in Mosquito. (Room temp.)	Date of Application of Mosquito.	Number of Mosquitoes Applied.	Remarks.
1	Mild, 1. . . .	7th. .	5 days. . .	Aug. 11, 1900	1	Negative.
2	Very mild, 1. .	5th. .	5 " . .	" 11, 1900	1	"
3	Very mild, 1. .	5th. .	6 " . .	" 12, 1901	1	"
4	Very mild, 1. .	5th. .	6 " . .	" 12, 1901	1	"
5	Very mild, 1. .	5th. .	8 " . .	" 14, 1901	1	"
6	Very mild, 1. .	5th. .	10 " . .	" 16, 1901	1	"
7	Severe, 1 . . .	2d. .	3 " . .	" 18, 1901	1	"
8	Very mild, 1 .	5th .	13 " .	" 19, 1901	2	"
	Severe, 1 . . .	1st. .	3 " .			
9	Fatal, 1. . . .	2d. .	6 " .	" 25, 1901	1	"
	Mild, 1	1st. .	4 " .			
	Severe, 1 . . .	2d. .	2 " .			
10	Severe, 1. . .	3d. .	3 " .	Nov. 20, 1901	1	" Repetition of No. 10.
	Severe, 1. . .	3d. .	6 " .			
	Severe, 1. . .	5th .	11 " .			
11	Severe, 1. .	3d. .	6 " .	" 23, 1901	1	"
	Severe, 1. . .	3d. .	9 " .			
	Severe, 1 . .	5th .	14 " .			
12	Moderate, 1. .	3d. .	12 " .	" 26, 1901	1	" Repetition of No. 14.
	Well marked, 1	2d. .	10 " .			
13	Moderate 1. .	3d. .	15 " .	" 29, 1901	1	"
	Well marked, 1	2d. .	13 " .			
14	Severe, 1. . .	2d. .	10 " . .	" 26, 1901	1	" Repetition
15	Severe, 1. . .	2d. .	13 " . .	" 29, 1901	1	"
16	Severe, 1 . .	2d .	16 " .	Dec. 2, 1901	2	"
	Fatal, 1..	3d. .	12 " .			
17	Well marked, 1	3d. .	12 " . .	Nov. 26, 1901	1	"
18	Well marked, 1	3d. .	15 " . .	" 29, 1901	1	" Repetition
19	Well marked, 1	3d. .	18 " . .	Dec. 2, 1901	2	"
20	Mild, 1 . . .	1st .	4 " . .	" 17, 1901	14	" Repetition
21	Mild, 1. . . .	1st. .	11 " . .	" 24, 1901	7	"
22	Very mild. .	8th hr.	82 F., 22 days.	Jan. 25, 1901	12	"

NOTE.—The subjects of Experiments Nos. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, and 21 were proved to be susceptible by subsequent experimental infection. No. 22 declined a second test. In Experiments 20 and 21 the same set of insects and the same subject were used. Four of these insects infected this man six days later, on Dec. 30, 1900.

I have been impelled to look up the literature of this subject because I have seen several times of late the statement of Dr. Finlay that the Army Yellow Fever Commission has tacitly ignored his right of priority.[21] It is too late, after facts have been proved and recorded by others, to claim priority unless one can point to unmistakable evidence, in print, as proof that the facts have been demonstrated and duly reported. In our preliminary report[22] Dr. Finlay has been given due credit for priority in advancing and advocating the mosquito theory. Nothing more is due to him. He states[21] that he had "many years ago discovered that yellow fever was transmitted by mosquitoes," when in reality he simply assumes that to be the case, and the facts recorded by him do not sustain his claim.[23] He further states[21] that his own work had been singularly misrepresented before the American public, and that "among the facts and conjectures which are attributed to the recent investigators there is scarcely one which had not been asserted, demonstrated or suggested by me, as the result of my personal experiments and observations." One can only express admiration for this eminent scientist's persistent adherence to his theory, but the unbiased observer, after a perusal of his numerous writings, must agree with us that while he asserted and suggested everything that intelligent reasoning and profound knowledge could suggest, he failed to produce a single case of the disease. Our results have been confirmed by Guiteras with eight cases and three deaths;[24] Dr. Finlay's assumed results have never been confirmed by a single investigator. In our "Additional Note,"[25] we report among other instances one in which the bites of fourteen insects, applied four days after contamination, failed to infect, and the seven remaining alive failed also to infect eleven days after contamination, but on the seventeenth day following contamination the bites of four of the same insects produced an attack of yellow fever in "the same individual." During the whole of this time these insects had been kept in a heated room at an average temperature of 82 F. If, as is claimed by Finlay,[26] protection is conferred by one or two bites of "recently contaminated" (two to five days[19]) mosquitoes, this individual, who had received twenty-one bites from recently contaminated insects, should have been able to resist the bites of four of the same insects six and thirteen days later. Should one accept Finlay's extension of the incubation period to twenty-two days infection might then be erroneously attributed to the bites inflicted thirteen days before the onset of fever.

TABLE 3.—POSITIVE MOSQUITO INOCULATIONS OF THE ARMY COMMISSION.

No.	Character and Number of Patients Bitten.	Days of Disease.	Period in Mosquito.	Number of Mosquitoes Used.	Date of Application of Mosquitoes.	Incubation.	Character of Attack.
1	Severe, 1.	2d.	12 days	Room temp. 1.	Aug. 27, 1900. . . .	3 days, 7 hours . .	Severe.
	Mild, 1	1st.	6 days				
	Severe, 1.	2d.	4 days				
	Mild, 1	2d	2 days				
2	Fatal, 2. . .	2d.	2 to 16 days . . .	Room temp. 4.	Aug. 31, 1900. . . .	6 days.	Moderate.
	Mild, 8	1st and 2d. . . .					
	Severe, 7	1st, 2d and 3d. .					
3	Fatal, 2.	2d.	2–15 days.	Room temp. 5	Dec. 5, 1900. . . .	3 days, 10 hours. .	Pronounced.
	Severe, 1	2d.	1–19 days.				
	Mild, 1.	3d.	2–21 days.				
4	Fatal, 1.	3d.	17 days	Room temp. 4.	Dec. 8, 1900. . . .	5 days, 17 hours. .	Mild.
	Severe, 2	2d and 3d.	18 and 22 days. . .				
	Moderate, 1. . . .	3d.	24 days				
5	Fatal, 1.	2d.	19 days	1 (Room temp.)	Dec. 9, 1900. . . .	3 days, 12 hours. .	Mild.
6	Fatal, 1	3d.	20 days	Room temp 4.	Dec. 11, 1900. . . .	3 days, 20 hours. .	Moderate; relapse on 3d day.
	Severe, 2.	2d and 3d	21 and 25 days. .				
	Moderate, 1. . . .	3d.	27 days				
7	Severe, 1	2d.	1–24 days.	82 deg. F. 15	Dec. 21, 1900. . . .	3 days, 23 hours. .	Pronounced.
	Well marked, 2. .	1st.	10-5 and 12 days. .				
	Mild, 1	1st.	4-8 days				
8	Mild, 1	1st.	17 days	4 (82 deg. F.) . .	Dec. 30, 1900. . . .	3 days, 23 hours. .	Mild.
9	Well marked, 1. .	3d.	39 days	3 (82 deg. F.) . .	Jan. 19, 1901. . . .	4 days.	Moderate.
10	Well marked, 1. .	3d.	51 days	2 (82 deg. F.) . .	Jan. 31, 1901. . . .	3 days, 3 hours . .	Mild.
11	Well marked, 1. .	3d.	57 days	2 (82 deg. F.) . .	Feb. 6, 1901	3 days, 6 hours . .	Mild.
12	Fatal, 1.	2d.	16 days	3 (82 deg. F.) . .	Feb. 7, 1901	2 days, 22 hours. .	Moderate.
13	Fatal, 1.	3d.	1–53 days.	4 (Room temp)	Sept. 16. 1901 . . .	3 days.	Severe.
	Fatal, 1.	2d.	3–34 days.				
14	Severe, 1.	2d.	18 days	8 (Room temp.).	Oct. 9, 1901	3 days, 8 hours . .	Mild.

The Army Board worked on an entirely different hypothesis from Finlay, who believed that the infecting agent was retained on the biting parts of the mosquito, that infection was direct and no interval was necessary. The board worked on the hypothesis that the specific agent of yellow fever was probably one of that group of strict parasites that in nature necessarily pass through two distinct and alternating cycles of development, one within the body of a vertebrate, the other within a blood-sucking invertebrate host. Finlay believed that the bite of a single insect would confer a mild infection and multiple bites a severe one. In my own case, produced by the bite of a single insect, a fatal result was looked for during several days. Dr. Lazear was bitten by a single insect and died.[27] I became so firmly convinced that the severity of an attack depended on the susceptibility of an individual rather than on the number of bites sustained, that on Oct. 9, 1901, at Havana, I purposely applied to a non-immune eight mosquitoes (all I had) that had been contaminated eighteen days before. The attack that followed was a mild one, the temperature never reached 103 F., and dropped to normal on the evening of the fourth day.[27]

The original theory of Finlay has been variously modified by him from time to time to meet possible contingencies. *He now evidently inclines to the belief that* development of the germ takes place in the salivary glands of the infected mosquito.[21]

Table 4.—Positive Mosquito Inoculations of Dr. Guiteras.

Number.	Character of Attack and Number of Patients Bitten.	Day of Disease.	Period in Mosquito.	No. of Mosquitoes Used	Date of Application of Mosquitoes.	Incubation.	Character of Attack.
1	Severe, 1	1st	26 days	1	Feb. 23, 1901	3 days, 10 hours	Pronounced
2	Severe, 1	3d	19 "	4	Aug. 8, 1901	4 " 5 "	Fatal
3	Severe, 1	3d	19 "	1	Aug. 8, 1901	3 " 3 "	Mild
*4	Severe, 1	3d	20 "	3	Aug. 9, 1901	5 " 3 "	Fatal
5	Severe, 1	3d	24 "	1	Aug. 13, 1901	3 " 19 "	Mild
6	Severe, 1	3d	24 "	2	Aug. 14, 1901	3 " 21 "	Fatal
7	Severe, 1	3d	21 "	3	Aug. 11 1901	5 " 21 "	Moder'ly severe
8	Severe, 1	3d	34 "	2	Aug. 22, 1901	3 " 0 "	Severe

*Case 4 had been bitten with negative result ten days previously by four mosquitoes five days after they had bitten a fatal case in the third day. of the disease. See Case 33 of Guiteras' table, Amer. Med., Nov. 23, 1901, p. 811.

A complete proof or disproof of his claim of positive results for his recorded inoculations could easily be obtained by means of a series of innocent experiments. It is interesting to note that at the very time when this distinguished authority is in position to confirm the results of his first inoculations, if they are susceptible of confirmation, he takes the ground that inoculation experiments on human beings in Cuba must be strictly forbidden.[21]

It is unfortunate that Dr. Finlay in his numerous contributions to this subject very seldom gives exact references that would enable one to compare his more recent assertions with his former statements. In regard to his expressed opinion that the great merit of our work consists in our having accurately defined the danger line, beyond which there is a risk of producing severe or fatal experimental cases when non-immunes are inoculated with mosquitoes whose contamination is more than ten days old,[21] I desire to record my belief, based on experimental observation and on the results obtained by Guiteras, that it is impossible to confer protection or to produce infection of any grade, with an insect that has been contaminated less than a week, and that inoculations with a mosquito contaminated for a shorter period will be absolutely devoid of result. The accompanying tables, compiled from our and Guiteras' cases, afford a substantial basis for the assertion. I deem it a duty to the service to which I belong, to my dead colleagues (Reed and Lazear) and to the profession, to state the facts plainly and clearly. I do not expect that this paper will remained unanswered; nevertheless, I shall decline to engage in controversy and leave the final determination to those who are competent to judge, after they have carefully perused the publications herein referred to.

The mosquito theory has been practically demonstrated by the army commission and Dr. Guiteras in two series comprising twenty-two cases in all. The non-communicability of the disease by means of fomites has been a matter of common observation in certain localities, and has also been demonstrated practically by our own experiments and those of Havard and his associates. Yellow fever, therefore, is not a filth disease, in the strict sense of the term, and filthy accumulations are dangerous in this connection only, when accompanied by sufficient moisture to breed mosquitoes under favorable conditions of temperature. Under such conditions standing water is a source of danger, within dwellings or without, and whether dirty or clean, unless it be kept covered or is changed every few days. Yellow fever is a preventable disease; quarantine, if effective, will exclude it, but if the quarantine be evaded and cases gain entrance to a city the disease can be absolutely controlled and finally exterminated by measures directed against the mosquito alone.

Carter[7] has well shown[8] that first cases are not dangerous until after the lapse of a number of days, for, in his experience, persons in direct contact with them for a few days only never developed the disease after being placed in quarantine. This applies only to the first cases occurring in a town or neighborhood. He found that secondary cases did not appear until the expiration of a number of days varying from 11½ to 29, the average being eighteen. This interval represents the time necessary for the mosquito, after biting a patient, to become capable of infecting, plus the period of incubation in the person bitten.

The greatest obstacle to the control of this disease is the failure to recognize the first cases when they are not accompanied by black vomit. Some of these cases are so mild in character that no physician would dare to pronounce them yellow fever unless he knew the disease to be prevailing at the time. Susceptible persons visiting the house or living in adjoining houses would be bitten and develop the disease in near or distant localities several weeks later, forming secondary foci of infection. From these secondary foci tertiary foci would in time develop. The diagnosis of bilious remittent fever, dengue, etc., would serve to cover the earlier cases until the appearance of black vomit, by which time the infection would have become more or less widely disseminated. Such is the history of many outbreaks.

The number of mosquitoes in infested districts can always be appreciably diminished by giving attention to surface drainage and the removal of standing water, no matter how small the quantity or how pure the quality may be. Rain-gutters and conduits on buildings should be kept clear and free; cisterns, wells, flush-tanks and other permanent receptacles for water should be kept tightly covered or securely screened; privies and cesspools should be cared for; air vents to cisterns and wells protected by screens; and water should never be permitted to stand in any vessel or receptacle within a building longer than three or four days. Ditches and open drains containing water should be frequently flushed; old cans, crockery, etc., should be removed from the vicinity of dwellings; pools or ponds should be stocked with fish and deepened at the margins or treated with petroleum. As the stegomyia is largely a house-dwelling and a house-breeding insect, these and other similar measures will surely diminish their number and add to the general comfort and protection. In places exposed to yellow fever infection all fever patients should be protected, night and day, from the bites of mosquitoes by the use of netting and wire screens. Strict quarantine measures, local and general, with the isolation of patients and extensive and thorough fumigation of the localities where they are found will insure suppression of the disease wherever it may appear.

In the suppression or control of yellow fever disinfection, apart from fumigation, is a waste of time and money. Natural yellow fever is transmitted by the mosquito, and always and only by the mosquito. The harmlessness of fomites has been fully demonstrated by our experiments in 1900 and 1901, in which three young Americans slept for twenty consecutive nights in a room garnished with articles soiled with black vomit, bloody fecal discharges and urine from fatal and other cases of yellow fever. Three and four large boxes were packed and unpacked with these articles night and morning by these non-immunes, who suffered no disturbance of health from these exposures. The room was twenty feet by fourteen feet, double walled, tightly ceiled, heated to above 90 F. and dark. Water was always present to keep the atmosphere moist. Two other non-immunes then occupied the room for twenty nights while additional articles of bedding and clothing were added. They slept in the garments and between the sheets that had covered cases of yellow fever, some of which were fatal. The result of this second exposure was *nil*. A third attempt was then made with two additional non-immunes equally without success. Not the slightest indisposition followed close and intimate contact with this repulsive material in any case. Temperatures and pulse rates were recorded at regular and frequent intervals. Four of these seven non-immunes were subsequently infected by blood injections and by means of infected mosquitoes. A fifth resisted the mosquito once[28] and declined further attempts at inoculation.

Yellow fever has been eradicated from Havana, one of its endemic homes, by the institution of measures directed against the mosquito, after extreme cleanliness and energetic disinfection had proved a dismal failure. Several cases subsequently imported into that city have been handled with impunity by guarding the patients against the bites of those insects. A small outbreak in Santiago de las Vegas in 1901 was promptly suppressed by Colonel Gorgas by the use of means directed only against the mosquito. On those who decline to accept such evidence must rest the burden of proving that the disease is transmitted in some other way before their position can be sustained.

REFERENCES.

1. Medical Inquiries and Observations, Benjamin Rush, M.D., Philadelphia, 1805, vol. iv., pp. 10, 77, 175.
2. An Essay on Yellow Fever, by B. B. Strobel, M.D., Charleston, S. C., 1840, p. 162.
3. Report of Sanitary Commission of New Orleans on the Epidemic of Yellow Fever of 1853, New Orleans, 1854, vol. i., pp. 266. 278, 540.
4. The Epidemics of New Orleans, by Bennett Dowler, New Orleans, 1854, p. 44.
5. La Roche on Yellow Fever, Philadelphia, 1855, vol. i., pp. 67, 77, 79.
6. See footnote 2, p. 87, citing from the London Medical Gazette for August 1839.
7. New Orleans Med. and Surg. Jour., May, 1900.
8. Medical Record, N. Y., June 15, 1901.
9. Anales de la Academia de Ciencias Medicas de la Habana, Havana, xxvii, 1890-91, p. 501. (Finlay.)
10. Original Article—republished in English in the Revista de la Asociacion Medico-Farmaceutica, Havana, Cuba, Jan. and Feb., 1902. (Finlay.)
11. Finlay: Ibid., pp. 362 and 369; also Edinburgh Med. Jour., Oct., 1894, p. 334.
12. Proceedings of the International Congress of Hygiene and Demography, Budapest, 1894, p. 702.
13. Edinburgh Med. Jour., vol. xii, 1, pp. 523 to 526.
14. Finlay: Amer. Jour. Med. Sci., n. s., vol. xcii, 1886, pp. 402, 403.
15. Footnote to p. 369, Revista de la Asociacion Medico-Farmaceutica, Havana, Feb., 1902.
16. Medical Record, N. Y., Feb. 9, 1901, p. 203.
17. THE JOURNAL A. M. A., April 13, 1901, p. 1041.
18. Ibid., Feb. 16, 1901, p. 439; 3d conclusion.
19. Medical Record, Aug. 31, 1901, p. 344.
20. Case 8 of Dr. Guiteras' series, Amer. Med., Nov. 23, 1901.
21. See reprint, p. 8, on "Method of Stamping Out Yellow Fever, Etc.," by Dr. Charles Finlay, M.D., Conference of State and Provincial Boards of Health, New Haven, Conn., Oct. 20, 1902, and Medicine, Detroit, March, 1903, pp. 175, 179.
22. Phila. Med. Jour., Oct. 27, 1900.
23. Sternberg, Amer. Jour. Med. Sci., new series, vol. cii, 1891, p. 627, and Nuttall, Johns Hopkins Hosp. Reports, vol. viii, 1899-1900, p. 27.
24. Amer. Med., Nov. 23, 1901.
25. THE JOURNAL A. M. A., Feb. 16, 1901.
26. Finlay: Edinburgh Med. Jour., Oct. 1894, p. 335.
27. The Etiology of Yellow Fever, Amer. Med., Feb. 22, 1902, Case 2.,
28. Case 22, Table 2.

THE STEGOMYIA AND FOMITES.*

STANFORD E. CHAILLE, M.D.

NEW ORLEANS.

As a student since 1851 of yellow fever, especially of its causation and prevention; and as a citizen of New Orleans, who has shared its blighted prosperity and its grief, greater, because of this disease, than has afflicted any other place in our country, I deem it my first duty to express most profound and grateful appreciation of those who have, since 1900, contributed facts of incalculable value for prevention and for commerce.

The notable experiments of Dr. Walter Reed and his assistants, Drs. James Carroll and A. Agramonte—added to and strengthened by the researches and labors of Drs. Carlos J. Finlay and John Guiteras, of Drs. W. C. Gorgas, John W. Ross, H. R. Carter and probably others—and rendered possible by the official encouragement and aid of Surgeon-General Sternberg, U. S. A., and of Governor-General Wood, M.D., have contributed to our knowledge of yellow fever facts that I hope and believe will prove of greater value than all the facts gained by all preceding students of the disease. The names cited deserve the earliest place on the roll of honor of the twentieth century, the century probably destined to become unprecedentedly illustrious for additions to the best of all knowledge, that which contributes to the health and welfare of mankind.

These investigators have contributed four sets of precious facts:

First—Fresh blood or its serum, taken from a case of yellow fever during the first days of the attack, will give the disease, if hypodermically injected into a non-immune. Hence the blood contains the poison, probably an ultra-microscopic germ, as I maintained in 1880, and this poison, when fresh, is infective without undergoing any change outside of the body.

Second—The female stegomyia, serving as an intermediate host, can convey the poison to non-immunes. In 20 experimental cases (Reed's 12 and Guiteras' 8) the stegomyia became infected by sucking the blood during the first four days of the attack, but not later; and an interval of at least twelve days was required to infect a non-immune. However, it deserves note that no one has stated or proved that more numerous experiments might not have yielded some cases wherein the four days' time would have been prolonged and the twelve days' interval shortened. The facts thus far stated have not, I think, been denied by any one.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. W. S. Thayer, J. M. Anders and Frank A. Jones.

Third—Excluding all mosquitoes, fomites prepared and kept under all the known conditions, universally supposed to be the very best, for supplying the most virulent fomites, failed in December and January, though an artificial summer heat was maintained, to infect seven non-immunes extraordinarily exposed to said fomites. In a second trial the following September and October, 1901, under like favorable conditions, eight non-immunes also escaped infection. These negative results in two trials, involving fifteen non-immunes, have been confidently claimed to be conclusive of the impotency of fomites ever to infect; and this claim has been as confidently denied, because, as is said, of many facts explicable by fomites but inexplicable by the stegomyia.

Fourth—Disregarding filth and fomites, because two years of warfare against them had proved ineffectual, and limiting sanitary measures solely to excluding imported cases, to isolating every home case that did occur and to preventing in every possible way the access of mosquitoes—these measures were followed in Havana by the total disappearance of all home cases from Sept. 28, 1901, to May, 1903.[1] Note in this connection that not less than eight cases have been imported during this time, but these cases have been isolated and carefully protected from mosquitoes, and that there have been in Havana an abundance of non-immunes. Now these four facts, introduction of imported cases, presence of many non-immunes, protection from mosquitoes and freedom from yellow fever in Havana, annually infected for at least 140 years, and monthly certainly for forty-five years and probably longer, were either cause and effect or the most extraordinary coincidences in the history of yellow fever. The more numerous such coincidences may become the stronger the proof of cause and effect. Several such coincidences have already been reported, viz., at Las Animas Hospital, Havana, 1899 and 1900, at Las Vegas, 12 miles from Havana, 1901, and at Havana, 1901, 1902 and to May, 1903.

Further, freedom from yellow fever, though stegomyiæ were present, would not be conclusive evidence against them; though present they might not be infected; and, if infected, very many would die prior to the twelve days requisite to become infective, and those that lived long enough to become infective might fail to gain access to non-immunes, and such failures would be the more probable the more numerous the immunes. Still further, the following reports are suggestive. It is now generally conceded that without anopheles there is no malaria. However, localities are reported from Italy, France and other countries where, although malaria once prevailed, it no longer occurs, and yet this failure to occur coexists with the annual importation of malarial cases and the continued presence of many anopheles. And a locality is reported in England where anopheles refused to suck man's blood.

The case of fomites versus the stegomyia is of the utmost importance for prevention and commerce and now deserves consideration. The only advocates of fomites known to me who have published their views are two distinguished sanitary officers, having much knowledge of and experience in yellow fever, Dr. John H. Purnell of Mississippi and Dr. Edmond Souchon, president of the Louisiana State Board of Health. The arguments of one or the other, to prove that the stegomyia is not the sole cause, but that fomites are also a cause, will be summarized also under four heads.

First—It is claimed that the freedom of Havana from yellow fever in 1901 and 1902 was not due to the warfare on mosquitoes, but to the rigid exclusion of imported cases and to the dying out of the disease. In support of this claim there is some evidence that other Cuban cities escaped yellow fever without effective warfare against mosquitoes. But, even if this evidence were indisputable, there are good reasons for believing that imported cases were excluded, that any cases that did occur were isolated and access of mosquitoes to them was prevented, and that these cities had very few non-immune inhabitants. For such reasons these cities may have escaped yellow fever consistently with the stegomyia theory, although these cities may have failed to wage effective warfare against mosquitoes.

The tendency of yellow fever, as of other infectious diseases, to die out, in spite of the coexistence of some cases and of many non-immunes, has been manifested many times even in the distant past, when imported cases were not excluded and when there was no warfare against filth, fomites or mosquitoes. A cause of this tendency of yellow fever may be a scanty reproduction in some years of the stegomyiæ, as occurs with other insects. In spite of this tendency, it is certain that this has failed for 140 years to manifest itself in Havana to an extent at all comparable with the remarkable cessation of the disease since warfare against mosquitoes was begun. Hence, the extraordinary escape of Havana, the worst and the longest infected city in the world, inclines the probabilities strongly in favor of the claim that its rescue from yellow fever is due to warfare against the stegomyia.

Second—The frequent return or recrudescence of yellow fever six, twelve or more months after a cold winter and without the reintroduction of the infection, is incompatible with our present knowledge of the duration of life of the stegomyia. The greatest duration yet reported was found by Dr. John Guiteras in 1902. Of eleven infected stegomyiæ two died by the tenth day, five were dead by the sixty-fifth day, and of the remaining six the last one lived to its one hundred and fifty-fourth day. It deserves special notice that 18 per cent. died before the twelfth day, i. e., too soon to have become infective, and that this mortality occurred in captives well protected from the many enemies mosquitoes are exposed to in the open. Dr. H. A. Veazie has reported that of one hundred New Orleans mosquitoes one-half died in the first week and only two were alive on the thirtieth day. Manifestly a mosquito's life will vary with its protection from enemies, with its food, temperature, light and other variable conditions. How long an infected stegomyia may possibly live under the influence of hibernation and other exceptional conditions is yet to be determined. However, Dr. John Guiteras[2] has reported that of thirty-three female stegomyiæ kept in an icebox at 40 to 50 F., and without food or water, three lived to the eighty-seventh day and were then destroyed by ants.

My consideration of recrudescence will be limited to criticisms on one example cited oftenest, cited recently by Dr. Purnell and by Dr. Souchon, cited also by Dr. Sternberg and by myself in 1880, when, however, every one believed in fomites and no one in stegomyia. Hence, my reinvestigation of the supposed recrudescence in Memphis in 1879, after its epidemic of 1878, the most fatal one, proportionately to population, ever in the United States.

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[1] The warfare against mosquitoes in Havana was begun Feb. 27, 1901; preventive measures against filth and fomites were abandoned July 1. There were twelve deaths in January and February, but only six deaths March 1 to Sept. 28, 1901, and none since; with the sole exception that of seven *imported* cases of yellow fever in 1902, two died.

[2] Revista de Medicina Tropica of Havana, April, 1903.

The best authority for this recrudescence was Dr. G. B. Thornton, the thoroughly trustworthy president of the Memphis Board of Health. He reported[3] that the first case was attacked about the 5th, was reported on the 8th and died the 9th of July; that, although in all preceding epidemics the first case was known to have been imported from New Orleans, yet in 1879 no such case was discovered; and further, that yellow fever was not then "prevailing" in any part of the United States. From these premises Dr. Thornton and most of the medical profession concluded that the disease was due to "local origin," which, in this case, meant to houses and their contents infected in 1878, i. e., to the recrudescence of the dormant vitality of infected fomites. A conclusion in full accord with the professional opinion of 1879.

To these facts and to this conclusion I now add, for the first time, I believe, in this connection, the three following facts: Dr. W. L. Coleman,[4] an inspector of the National Board of Health, maintained that the disease was certainly due to a fresh importation of fomites, viz., to two box-cars of bananas from the West Indies, via Havana and New Orleans, that arrived in Memphis prior to July 4, 1879. Further, Dr. Thornton's final conclusion was that "the disease may have been imported. If such was the case, the epidemic was, in my opinion, due to two causes, importation and local origin." Still further and more important, while it was correctly stated that yellow fever was not "prevailing" anywhere in the United States, none the less it did exist in New Orleans, as proved by the annual report of the Louisiana State Board of Health for 1879, wherein is recorded one imported case, March 26, one home case on the 16th and another on the 17th of June. Evidently, then, there was time sufficient for stegomyiæ to be transported, by the open communications then existing, from New Orleans to Memphis to infect the first case reported in Memphis. These facts prove that this alleged recrudescence might have been due to stegomyiæ and not to fomites. Conjoin the indisputable fact that the first cases reported in New Orleans have often not been the first that occurred and the case of the stegomyia becomes still stronger. It is doubtful whether, if all the facts could be known, other instances of recrudescence by *fomites* would *not* become as questionable as the most often cited of all instances, Memphis in 1879.

Third—In behalf of fomites it has been urged that non-immunes in camps of refuge, infested by mosquitoes and near infected cities, have been kept free from infection by the destruction or disinfection of fomites. This conclusion is very far from proven. Such cases of the disease as were imported were usually promptly isolated; quite possibly there may have been swarms of mosquitoes, but no stegomyiæ, for these seem to prefer houses and to "shun rural districts and open fields"; and there may have been stegomyiæ but none infected. Further, New Orleans could furnish many instances of adjacent places in the country, and of hospitals, asylums, jails and convents within the city, into which places cases of yellow fever were introduced but failed to originate any cases though fomites were neglected. Such exemptions occurred frequently in the distant past, when no efforts were made either to isolate the disease or to disinfect fomites. It seems to me that all such exemptions are more explicable by the absence of infected stegomyiæ than by the fomites theory.

Three instances, often cited, of exemption from yellow fever will illustrate the claims of advocates of fomites. In 1878 many hundreds of refugees fled from Memphis to Camp Joe Williams, four and a half miles distant. Fomites were destroyed or disinfected, and although there were imported into this camp 186 cases of yellow fever, of whom 58 died, yet no cases originated in this camp. However, Colonel Cameron,[5] commander of the camp, reported the following facts: "Four grave diggers and one carpenter, on constant duty at the hospital carrying the sick, washing the bodies, sleeping on infected bedding, in tents, wearing clothing stripped from the bodies of deceased, remained on said duties seven weeks with perfect impunity from attack." "None had previously had fever." Now if many refugees owed their escape from yellow fever to destruction of fomites, what protected these five non-immunes from fomites not disinfected?

The epidemic of 1878 in Memphis, *with not one-sixth* the population of New Orleans, caused over 5,000 deaths, while there were less than 5,000 in New Orleans. However, in 1879 Memphis had "1,532 cases and 485 deaths" by yellow fever, while New Orleans had only 48 cases and 19 deaths, and 34 of these cases and 12 deaths were restricted to a limited section of the city. Now this comparative exemption of New Orleans was claimed to be due to the vigorous co-operation of the state and national boards of health and the Sanitary Association in the repeated cleansing and renovation of infected places, in thorough disinfection and in the sulphur fumigation of houses.

Further, in 1882 there were only four reported deaths in New Orleans, and this comparative exemption was claimed to be due to thorough cleansing and disinfection of the section surrounding the focus of infection "for at least four blocks each way around the focus." Now, it is notable that in the last two instances sulphur fumigations were vigorously applied—the very remedy specially recommended to destroy stegomyiæ.

Fourth—Reported cases of two kinds have been urged as explicable by fomites, but inexplicable by stegomyiæ. Some cases of yellow fever have been reported where the possible infection of stegomyiæ and the transfer of the infection to the person attacked gave intervals of only 8, 9 and 10 days instead of the least interval of 12 days found in the twenty experimental cases. More experimental cases *might* have proved the possibility of a less interval than 12 days, but a more serious criticism is that the briefer intervals were based on supposed knowledge of what was the very first case, very often too doubtful to justify a final conclusion.

Numerous other cases are reported to have followed, within the usual period of incubation, exposure to fomites under conditions such that the presence of any *infected mosquitoes* was highly improbable *if not impossible*. In some of these cases the disease was limited to the few non-immunes exposed to the fomites, while other non-immunes in the very same house were not attacked. In such cases it is a notable and suspicious fact that even the fomites from those attacked failed to infect the other non-immunes in the same house.

All of these reported cases, as well as some other issues, are amenable to the two following criticisms: Every reporter seeking a cause is not only apt to find it in whatever may be universally admitted to be a cause, though not one, but is also apt to overlook a universally unsuspected cause, though this be the true one. There have been many reported cases of disease explained satisfactorily to reporters and their readers by witches, the moon, comets, bile, urea and other erroneous causes. Without anopheles malaria does not occur, yet the very word falsely assigns bad air as the cause, and this disease has also been often attributed not only to bad water, but also to watermelons, and these causes have been maintained by evidence satisfactory to reporters and their readers.

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[3] In Vols. v and vi, Transactions of the American Public Health Association and in recent letters to me.

[4] See "Yellow Fever and Dengue," by W. L. Coleman, M.D., pp. 100-2.

[5] Transactions of American Public Health Association, p. 155, vol. v.

Many cases of yellow fever in adults, many more in children and negroes, can not be diagnosed by the best experts, and much more numerous must be the cases undiagnosable by the great majority of physicians who are not experts. Over fifty years' study of yellow fever, eight of these years living day and night in the hospitals of New Orleans, when the disease annually prevailed, and six more of these years employed as a United States sanitary officer specially for yellow fever, and given unusual opportunities for investigation, would justify me in swearing in court that the first cases officially reported in a civil population are very often and, as I believe, usually not the first cases that occurred. This is due not merely to diagnostic deficiencies, but also to two other causes, viz., lack of opportunity among the numerous poor unvisited by a physician, and the very frequent neglect of physicians to report their first cases, even when diagnosed. This neglect is due to their unwillingness to become, in public estimation, odious alarmists and also to subject their patients and the families of their patients to disagreeable notoriety and often to legal restraint by sanitary officers. Practical sanitarians are forced to recognize that the more the financial welfare of the public is threatened by the invasion of a communicable disease and the greater the legal restraint imposed on the public and on the sick and their families, the fewer will be the cases reported. For reasons now stated conclusions based on supposed knowledge of first cases are often untrustworthy.

Three more sets of facts pertinent to my subject deserve brief attention. Dr. H. R. Carter,[6] the author of the best summary known to me of arguments in favor of the stegomyia, urges this very weighty generalization. He claims that every disease having an intermediate host is propagated solely by its special host and never by fomites. Though convinced that present knowledge favors this generalization, I doubt whether we yet know enough to justify a final conclusion. In any case, claims for the infectivity of fomites would be more explicable should knowledge enlighten our ignorance in the following particulars.

Of these diseases malaria and the Texas cattle fever spread by a special tick, are best known in our country and most resemble yellow fever. It deserves note that the tick fever, besides other resemblances to yellow fever, has these two striking ones, the young have usually very mild attacks and an attack confers immunity. Now, the infecting germ persists in malaria often for months and years and in cattle fever probably for life; and this long persistence of the germ in healthy immune cattle caused until recently the erroneous belief[7] that infected ticks infected their own eggs. However, my present point is that while the blood in malaria and in cattle fever remains infective long after the first attack has ended, yet the twenty experimental cases indicate that the blood of a yellow fever patient is infective during only the first four days of the attack. The lack of resemblance thus indicated justifies the suspicion that a closer resemblance may yet be proved. A ray of light may yet be found in Finlay's belief that in malaria man is the permanent and anopheles the temporary host, while in yellow fever man is the temporary and the stegomyia the permanent host.

Further, Dr. Patrick Manson, one of the best authorities on malaria, gives good reason for his beliefs, that the malarial germ may have other host than man, and that this germ may be deposited in the soil, inhaled in dust and thus cause the disease. And many good observers still maintain that drinking water may become infectious by the dying therein of infected mosquitoes, as is still taught by some to be the case in filariasis. Still further, Dr. Carlos J. Finlay believes that the fresh blood of yellow fever on the proboscis of a stegomyia can infect a non-immune within the usual period of incubation, while the germs within the stegomyia would require twelve or more days to become infective. I have now indicated five particulars, as to which future knowledge may throw light on the causes that have led to belief in fomites.

The history of the remarkable change of view in New Orleans as to belief in fomites is instructive. A great majority of its physicians, myself included, firmly believed, until at least 1867, that yellow fever originated in this city as was then universally claimed as to other habitually infected cities, and all of this great majority unhesitatingly testified that they had never observed a single case either of direct contagion or of infection by fomites. As steamboats and railroads multiplied and many adjacent places on the routes of travel became infected after outbreaks of the disease in New Orleans, the conviction gradually gained ground that yellow fever did follow the routes of travel and was an infectious disease. Then followed numerous reports that some places on these routes had not had any case of yellow fever introduced therein, certainly the usual precursor of an outbreak, but that fomites had been introduced. Our imaginations failed to invent any explanation for these credited reports except infection by fomites. However, this concession to fomites was made very grudgingly, because New Orleans physicians could not ignore their innumerable experiences of the failure of fomites to infect. Hence the hypothesis invented to explain these credited reports was that, while fomites were usually innocous yet that under the rare influence of some unknown mysterious conditions fomites did become infectious.

For such reasons I, as soon as convinced that mosquitoes did follow the routes of travel and that the stegomyia was a conveyer of yellow fever, embraced the stegomyia as a welcome substitute for those unknown mysterious conditions about which I have wasted, as I now believe, many weary hours of study; and I earnestly hope that the future may permit my brain to rest in peace with the comprehensible stegomyia—unvexed by the incomprehensible, mysterious hoodoo, fomites. I, like others, have advocated fomites, always, however, citing my authority. For my part, I have never secured satisfactory proof of a single case either of direct contagion or of infection by fomites. I have investigated reported cases of infection by fomites, and I have known several cases, supported by very strong evidence, which, after laborious investigation, were conclusively traced to a usual cause, viz., to infected houses wherein were women of easy virtue. These had received night visits, carefully concealed and denied by men who, living in uninfected country places, had contracted the disease in said infected houses, and not by fomites in their uninfected country places.

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[6] Bulletin No. 10, Yellow Fever Institute of U. S. Bureau of Public Health and Marine-Hospital Service.

[7] According to Dr. D. E. Salmon, Chief of U. S. Bureau of Animal Industry.

Finally, it deserves consideration in behalf of sanitary officers who hesitate to abandon the disinfection of fomites, that more places than New Orleans have suffered by numerous advocates of innumerable "sure cures" and sure preventives for yellow fever. Notable among these advocates was Gen. Benjamin Butler, U. S. A., in 1862. He, whose memory is still odious in New Orleans, issued in 1863 a pompous farewell address in which he proclaimed: "I have demonstrated that the pestilence can be kept from your borders." His sure preventive was cleanliness, enforced by sanitary regulations, executed by an efficient sanitary police. However, conjoined with this sure preventive the U. S. Navy effectually blockaded New Orleans. General Butler's sure preventive was heartily indorsed by many medical officers of the Army, by northern physicians generally, by public and medical press and by many eminent sanitarians. Among these was Dr. Elisha Harris of New York, who had held several of the highest positions as a sanitary officer and became a president of the American Public Health Association. His advocacy was so conspicuous and enthusiastic that I replied to General Butler's claim[8] and closed with this question, which has never yet been answered: If New Orleans was saved from yellow fever by General Butler in 1862, when there were two reported deaths, who saved New Orleans in 1861, when there was not one reported case or death, and when blockaded New Orleans was occupied by General Lovell and his very many non-immune Confederate soldiers, who enforced no preventives of any kind?

CONCLUSIONS.

My reasons have now been indicated for the five following conclusions: The probabilities now are that the stegomyia, the only cause yet proven, is the sole cause for the dissemination of yellow fever; but that time is required to convert these probabilities into certainty. Boards of health, should they neglect any practicable measure of warfare against the stegomyia, would deserve the severest punishment of the worst criminals. Southern boards of health are excusable for over-precaution against yellow fever. States adjacent to Louisiana have power, by sanitary restrictions, to strangle the commerce of New Orleans and Louisiana should not abandon the disinfection of fomites until approved by said states. Boards of health are representatives of the people and are justified in continuing to disinfect fomites as long as public opinion may favor this measure and until the probability of its inutility is converted into certainty.

To my many friends who urge that Mrs. Stegomyia has inherited all the claims of her father, Mr. Fomites, who is dead and ought to be buried, I tender the advice given at a numerously attended funeral by the undertaker: "Gentlemen, gentlemen, please don't crowd the mourners"—mourners over the remains of Mr. Fomites!

DISCUSSION

ON PAPERS OF DRS. CARROLL AND CHAILLE.

Dr. Edmond Souchon, New Orleans—It is impossible not to be deeply impressed by the reading of the experiments made by Reed and his associates in Havana. The simple, direct, positive, American-like manner in which these experiments were conducted can not but fill our minds with noble pride, as scientists, as men and as Americans. As such I would most probably have joined also the army of followers that have been conquered by the immortal Reed, but as the responsible officer of the Louisiana State Board of Health, the duty of which Board is to guard the valley of the Mississippi against the introduction of contagious diseases, I am compelled to carefully examine into every point, and to submit all the statements, past, present and future, to the crucial test of the Pasteur law, in accordance to which no facts should be accepted as thoroughly proven until all possible means to disprove them have failed. It is because Pasteur applied this law to his own work that not one of Pasteur's statements has ever been refuted.

At the outset, kindly note the words "responsible officer." The sense of responsibility for the awful consequences of possible errors changes the whole aspect of questions. The irresponsible ones are always quick to urge on. When they meet with reverses they naively say that they never would have thought that possible, and that is the end of it.

But when responsible officers have to face the introduction of contagious diseases, the press, the people, the authorities, all unanimously shout that they should have known better, should have been more prudent and more slow in applying new theories; and general condemnation is forever attached to their fair names. But a few years ago all these tragic events were enacted in this very city.

Then, there comes in also the overpowering consciousness of the dire calamities, the sufferings, the anxieties and the sorrows of sickness and the deprivations and ruins or quarantines. All this is properly calculated to cause responsible officers to be doubly careful before making any changes in quarantine regulations which may be followed by pestilence and quarantines.

The factor of responsibility is well illustrated by the following anecdote: A very high health official once had presented to him for signature a telegram relating to a very important quarantine matter. The chief scanned the prepared telegram most carefully, then said to his assistant that since he had charge of that department to sign the telegram himself. The assistant retired and it took him two hours to find the wording of a telegram which he would sign and be responsible for the consequences. On going over the records of all the quarantine stations, state and federal, to which he could have access to and also over the scanty literature on the subject, the writer of the present was confronted with a number of cases of yellow fever where it was impossible for him and his responsible colleagues to see the intermediation of the mosquitoes, bearing in mind the fact that the mosquito does not live more than five days without water in the summer months.

We have collected 27 such cases in the meager literature of the day. Some are land cases and some are shore cases. However much I would like to read some of them to you, the time allotted me will not permit.

If such cases have been observed there have surely been many which have not been recorded. If such cases have presented themselves in the past, similar cases may again present themselves, and how can we safely ignore them in our quarantine regulations until they have been explained satisfactorily to the responsible officers.

To say that these cases are errors of diagnosis is begging the question. Reasonable men will admit that some of the cases may have been diagnosed wrongly, but reasonable men will also admit that it is unreasonable to say that all the cases were mistaken cases.

The first and foremost perplexity of the responsible officers was the question of the treatment of fomites. From the known experiments made by Reed and Carroll, Guiteras and Ross, it is contended that the disinfection of such is unnecessary. To these experiments the responsible officers oppose the fact that they were made at a time of the year when yellow fever is not at its worst, except perhaps the early experiments of Ross.

Then we must consider that 30 per cent. of the non-immunes bitten by infected mosquitoes did not develop yellow fever. It soiled and these men slept with their heads between these bloody towels. They, too, came out in perfect health. Gentlemen, I believe positively that fomites are perfectly harmless. The material was kept there for several months and then removed without any precautions, sent to the laundry, and no one who handled them contracted yellow fever. Of 7 individuals experimented on, four subsequently contracted the disease from the bite of the mosquito and the subcutaneous injection of infected blood. There was no question as to the susceptibility of those infected. All were Americans. These experiments were reported in 1900, in August, by Drs. Guiteras and Ross, and another physician of Havana, and all with the same results.

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[8] In the New York Sanitarian, August, 1882.

After such experiments I contend that the burden of proof rests with the other side. On those who decline to accept this practical demonstration rests the burden of proof, and they must prove that the disease is transmitted in some other way. If it can be proven that the disease is spread by fomites we are willing to yield. I do not believe there is any doubt that our results will be confirmed, as they have already been so far by certain investigators. It has been found that those who suffer from the disease can be handled with impunity by nurses without any extension of the disease. Personally I believe that if there was no quarantine and no disinfection the disease could be excluded or prevented from spreading by proper precautions. Of course, that would result in placing everyone beneath a mosquito bar and protecting them by wire screens. Then there would be no possibility of spreading the disease. There are no cases of yellow fever now in Havana except imported ones. In regard to Dr. Souchon's statement with reference to the vessels arriving at the port of New Orleans after trips from South America and with the fever developing among the passengers five or six days after arriving at quarantine, they probably were infected after their arrival at the quarantine stations. There is an immense amount of literature on this subject.

COMBINED INTRA-UTERINE AND EXTRA-UTERINE PREGNANCY; OPERATION AND RECOVERY.

G. J. HAGENS, M.D., and J. J. MOORHEAD, M.D
CHICAGO.

A perusal of the literature and the failure to find the coincidence of intra-uterine and extra-uterine pregnancy mentioned in a number of the latest text-books would indicate that this form of gestation is certainly infrequent.

B. B. Browne[1] gives a report of the published cases, 23 in number, dating from 1708 to 1880, and adds a case operated on by H. P. C. Wilson of Baltimore.

Straus[2] states that no fewer than 32 instances of tubal pregnancy coexisting with intra-uterine gestation appear in literature. In Straus' table the maternal mortality amounts to 14 in the 32, but 10 of the 14 were in cases dating from 1820 to as far off as 1879. In 13 cases both extra- and intra-uterine pregnancies continued to term; in 4 both fetuses were living, and out of these 4 only 2 were cases in which both fetuses were delivered alive, the one normally, the other by abdominal section. But one mother was lost out of these 2 cases. In 3 cases one pregnancy alone continued till term, in 2 it was the normal gestation, in one uterine abortion occurred at the sixth week and tubal pregnancy continued to term. In 5 cases the simultaneous pregnancies were diagnosed before uterine labor or operation. In 9 cases the diagnosis was made after spontaneous termination of the uterine pregnancy. In 6 cases it was not made at all, being discovered at necropsy; in 6 cases it was detected during abdominal section, in 2 after abortion of the uterine pregnancy, in 2 at an abdominal section after abortion, in one after detachment of the placenta from the uterine cavity, while in one intra-uterine pregnancy was not detected until two months after the tubal sac had been removed. This is the only case in which, after that operation, uterine pregnancy continued to term. The child was living and was reared.

Our contribution is as follows:

Mrs. J., aged 33; housewife; married 12 years; mother of five living children; youngest child born three years ago.

Since she first menstruated, at 12 years of age, this function has been regular and painless. Had typhoid fever eight years ago. No definite history of pelvic disease.

Last menstrual period began Oct. 20, 1901; usual duration of five days. One month later she noticed a bloody discharge from vagina. Two weeks later she complained of pain in right lower abdomen, also frequent and painful urination. Treated at this time for supposed bladder trouble. On December 18, while seated in a chair, she was suddenly seized with intense cramp-like pain in right groin, accompanied by cold sweat and faintness. Rest in bed for thirty-six hours afforded relief, although she was unable to perform her usual household duties. Bleeding continued at intervals until latter part of December.

We first saw the patient at 3 p. m., Jan. 31, 1902. About 9 o'clock that morning there occurred an attack similar to that previously described.

Her expression was anxious; she complained of severe pain, paroxysmal in character, located in right inguinal and sacral region. Pulse, 100; temperature, 99.4; respiration, 26. Chest negative. Abdomen distended. On palpation no tenderness except over an area extending transversely from right iliac spine to three inches to left of median line, and upward to a point midway between symphysis pubis and umbilicus. In this locality was felt a mass, slightly movable, regular in outline, giving a flat note on percussion. External genitalia showed usual signs of pregnancy. No hemorrhage. Bimanual examination revealed a soft cervix, not patulous, displaced forward and upward; cul-de-sac and right pelvis completely filled by a swelling, somewhat irregular on lower surface and very tender to touch. No distinct sulcus between the uterus and mass could be determined. The patient at this time was quite restless. Auscultation not attempted.

The clinical history and physical findings led to a diagnosis of extra-uterine with probably intra-uterine pregnancy.

She was taken to hospital; prepared for both abdominal and vaginal section. Under ether anesthesia, examination proved more satisfactory. The swelling seemed to be continuous with the right horn of an enlarged uterus. Incision posterior to cervix, opening of cul-de-sac and base of right broad ligament was followed by a gush of partly clotted blood; placental tissue was punctured, and a perfectly formed fetus extracted by the feet; placenta removed piecemeal. One hand in cavity now felt the womb softened and enlarged in size to that of pregnancy between the third and fourth month. While on the table patient became almost pulseless, requiring vigorous stimulation. Sterile gauze packing controlled hemorrhage. Twenty hours later, following intermittent pains and slight bleeding, a second fetus and placenta were expelled from the uterus. Packing removed on fourth day. The intra-uterine fetus measured 12 cm. from vertex to rump, the extra-uterine fetus 10 cm.

Convalescence was interrupted by a slight elevation of temperature and pulse, beginning on third day and continuing two weeks, evidently due to mild sapremia. Drainage from cavity profuse for several days. Patient sat up in bed on seventeenth day, returning home one week later, the wound having closed. Recent examination finds the uterus in good position, well involuted, freely movable; some thickening of right broad ligament.

In this instance there was a rupture of tube on lower surface; the fetus and placenta developing within the right broad ligament—a true intra-ligamentary pregnancy.

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[1] Trans. Am. Gynec. Soc., 1881.

[2] Zeit. f. Geburtsh. u. Gynak., 1900.

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THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITER.

The realm of the physician is gradually becoming more and more circumscribed. His domain, or, what he seemed reasonably justified in considering his undisputed domain, is steadily being invaded by the intrepid surgeon. Who, ten years ago, would have thought that nephritis would ever be treated by means other than medical? Chronic endocarditis would seem to be an affection that the clinician would ever claim undisputed right to treat without the aid of the surgeon. Yet Lauder Brunton, a physician and not a surgeon, as a result of experiments on dogs, advances the view that there is sufficient evidence to warrant the surgeon in incising the constricted mitral orifice in cases of advanced mitral stenosis. Who will be the venturesome surgeon to first act on this suggestion and what will be the result? We had thought that angio-neurotic edema was exclusively within the sphere of the physician. Resection of the nerve supplying the affected area has been advocated and even carried into effect with beneficial results in this or a closely allied affection.

Physicians are quite ready to concede that, up to the present time, the therapeutic treatment of exophthalmic goiter has been, on the whole, eminently unsatisfactory. Grünbaum, during the last year or two, has used the serum of thyroidectomized goats in the treatment of this disease. We shall have to await the results of more extended experience with the serum-treatment before passing judgment on it. Considering our demonstrated helplessness in securing any permanent improvement by the medical treatment of Basedow's disease in any large percentage of cases, the physician will welcome the inroad of the surgeon and the results he has obtained in this distressing disease. We are indebted to Professor Kocher of Bern for having conclusively demonstrated that surgical procedures give by far the best results ever obtained in the treatment of this affection.

Albert Kocher[1] has recently reported the cases of Basedow's disease which have come under the observation of his father, Professor Kocher, in his hospital and private practice between the years 1883 and 1899. The series comprises 93 cases, of which 74 were cases of true exophthalmic goiter. What is of especial interest in this monograph is the record of Professor Kocher's results in the operative treatment of this disease. Kocher insists that the operation should not be done when the patient is in the stage of marked cardiac and psychical irritability. Means must be used to reduce these as much as possible first. All the operations were performed under the local use of a 1 per cent. solution of cocain. Altogether, 59 of the 74 cases of true Basedow's disease were operated on.

Four of the 59 cases died with symptoms of tetany within ten days of the operation. Of the remaining 55 cases, 39, or about three-fourths, had unpleasant postoperative symptoms. These consisted of transitory psychical disturbances, irritability, oppression, palpitation, sensation of heat, congestion of the face, general tremor, sweating, vomiting, fever and irregular, frequent pulse; in fact, temporary increase in the symptoms present before the operation. The fever and tachycardia persisted in all the 39 cases. The other symptoms mentioned occurred in the majority of the patients. The possibility that these symptoms were due to an acute toxemia resulting from absorption of certain substances pressed from the gland during the operation is discussed, but a satisfactory explanation for the aggravation of the symptoms is not arrived at. The other 16 patients operated on had no disagreeable after-effects. The results of the operative treatment are satisfactory. Of the 59 cases operated on, 45, or 76 per cent., were cured; 8, or 14 per cent., were decidedly improved; 2, or 3.5 per cent., were only slightly improved; 4, or 6.7 per cent., died with symptoms of tetany after the operation.

In 15 of the 74 true Basedow cases medicinal treatment of various kinds was used. The results, notwithstanding the fact that several of them were mild cases, are in striking contrast to those obtained from operative procedures. In only one case could a cure be said to have occurred, and this was really brought about by the patient developing an intercurrent disease.

Postmortems were obtained in three of the four fatal operative cases. Several factors may have played a part in causing the fatal termination in the first case. There was a persistent thymus; the heart was dilated and there was a fluid exudate in the serous cavities, and the superior cervical ganglion was very much enlarged. In the second case death was found to be due to double-sided pneumonia and pleurisy. The fatal result in the third case was believed to be due to the extreme severity of the intoxication. At autopsy the dilated heart, spleen tumor, jaundice and fatty degeneration of the liver and spleen confirmed this view.

The profession should be familiar with Kocher's brilliant results. Clinicians will welcome the invasion of their territory when results such as these are obtained. A vigorous warning against this operation being undertaken by only the most experienced surgeons must be made, however. Only those who have had wide experience in thyroid surgery and in the local use of cocain should undertake the operation.

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[1] Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, 1902, ix, Bd., 1 u. 2 Heft.

THE SEASONAL PREVALENCE OF TYPHOID FEVER AND ITS RELATION TO SEASONAL TEMPERATURE.

The prevalence of typhoid fever at certain seasons has given rise to several explanatory hypotheses. Perhaps the most important of these, and certainly the best known, is that of Pettenkoffer, who tried to establish a relation between the level of the ground water and variations in the prevalence of typhoid. It is true, that at Munich there existed a definite relation between the level of the ground water and typhoid, but, as pointed out in the recent statistical study on temperature and typhoid fever by Sedgwick and Winslow,[1] in most cases it does seem as if the possibility of the influences of temperature had not been satisfactorily excluded. Indeed, there has been no very satisfactory explanation offered of the fact that, in some cases at least, the number of cases of typhoid fever is most abundant when the ground water is lowest, as claimed by Pettenkoffer and his school.

Sedgwick and Winslow have gathered a large mass of statistics from various parts of the world and representing a wide range of climate in order to study what relations, if any, exist between the periodical prevalence of typhoid and temperature. It seems that only few have looked for an explanation of the seasonal distribution of typhoid fever in temperature, and to most of us the fall maximum of typhoid fever has remained a more or less mysterious phenomenon. The curves of Sedgwick and Winslow show a striking parallelism between monthly variations in temperature and the prevalence of typhoid. In northern localities the maximum number of cases of typhoid occurs in September and October. In southern cities, in which there is a milder winter, most cases occur in August and July. In tropical and subtropical regions the typhoid curve rises with the temperature in the spring, falling with it in the autumn, but shows a decrease at the time of greatest heat, due, perhaps, to great dryness or the action of sunlight. In certain cities in which the curves were more or less irregular, special factors may have entered into play that would tend to upset the parallelism between the temperature curve and the typhoid curve, as, for instance, sudden epidemic outbreaks, due to infection of a number of persons at once through some common medium, like milk or water. In such instances curves based on a small number of cases are likely to show irregularities that on superficial view do not harmonize with the typical seasonal curves. In some of the cities furnishing large statistics, such as Chicago, Cincinnati and Philadelphia, the typical curves show secondary elevations, one in December or January, and one between March and May. These rises in the typhoid morbidity are traced by Sedgwick and Winslow to the facts that these cities derive their water from sources liable to surface pollution, and that autumn rains and spring floods may carry into the water supply a larger amount of pollution at these times than at others. Sedgwick and Winslow would explain the reasons for the seasonal variations in the prevalence of typhoid fever and their relations to the temperature in the following way: The bacilli of typhoid fever do not thrive outside the body during colder seasons of the year. Some germs may survive the winter within the bodies of patients, e. g., the urinary bladder, or perhaps in vaults and other depositories where they may be protected from the cold. As the season grows milder the germs that enter the outer world will stand a better and better show to live and multiply and again enter human beings. Naturally this will be a cumulative process. "Each case will cause more secondary cases, and each of the latter will have a still more extensive opportunity for widespread damage. In our opinion, the most reasonable explanation of the seasonal variations of typhoid fever is from the effect of temperature on the persistence in nature of germs which proceed from previous victims of disease."

The data brought together by Sedgwick and Winslow certainly seem to warrant the conclusion that seasonal prevalence of typhoid fever is dependent largely on the influences of temperature on the growth and persistence of the typhoid bacillus. Their study constitutes a valuable addition to our knowledge of typhoid fever. The conclusions emphasize the urgent necessity in cities to "clean up" and to abolish all unsanitary conditions in crowded tenement districts so as to limit as much as possible the chances for typhoid bacilli surviving in our environment. These measures are, of course, only of secondary importance compared with the *sine qua non* for freedom from typhoidal diseases, namely, uninfected water.

A NEW CLINICAL ENTITY.

At the meeting of the Association of American Physicians in Washington last week, Dr. Osler presented the salient features of a series of cases which seem to fall under an as yet unrecognized independent symptom complex. Not that cases of the disease have not been previously described by others, but their full significance as belonging to a new clinical entity has not been properly appreciated. The distinctive features of the cases are chronic cyanosis in connection with marked polycythemia—an increase of the red blood cells so far above the normal that the blood count averages 10,000,000, and may go as high as 12,000,000 per cubic millimeter. Notwithstanding the intense cyanosis observed in these patients, which in certain instances makes them absolutely livid in appearance, they suffer but very little, and in some cases, indeed, not at all from dyspnea. The hemoglobin value of the blood is almost proportionate to the number of red cells and runs very high, commonly above 150.

As Osler said, ordinarily when a patient walks without difficulty into a physician's office, yet is suffering from a marked degree of cyanosis, the physician thinks at once of emphysema. If the condition is evidently one of labored breathing, heart or kidney disease may be the first thought. In some rare cases advanced tuberculosis may be found as the cause of the condition. In the cases constituting the new clinical entity, however, there is no emphysema, no heart disease and only slight albuminuria. The mild renal disturbance of which this is a sign is evidently not the cause of the cyanosis, but a result of the general condition and rather functional than organic, since, as a rule, it is not accompanied by casts, or only hyaline casts, and those not in large numbers. The only other pathologic conditions that are constant in the disease are constipation and an enlarged spleen.

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[1] Memoirs of the American Academy of Arts and Sciences, August, 1902, vol. xii, No. 5.

The cause of the affection is not clear. Usually the *history of the cases extends back over many years.* Dr. Osler's first patient was a physician, whose cyanosis had been a cause of wonder for several years before he came for professional consultation, the thought being that it was probably due to emphysema. It is well known that congenital heart disease producing the cyanotic condition called by some morbus cæruleus, or "blue disease," is most commonly accompanied by a very large increase in the number of red blood cells with a corresponding increase of hemoglobin. Eichhorst[1] refers to some cases of this kind in which the blood count was 9,000,000 and the hemoglobin value above 160 per cent. Some of these cases do not show symptoms in early life, but develop the circulatory insufficiency of their congenital heart disease only with advancing years. Of course, these cases, as suggested by Osler, are at most but analogous examples of cyanosis with polycythemia, and were referred to only as throwing a certain light on the special pathologic condition described by him. None of his patients exhibited any of the cardiac symptoms of congenital malformation, and all had lived well beyond middle life without any discomfort traceable to such a cause.

Curiously enough, after the report of Dr. Osler's cases, in which he referred to previous descriptions of like sets of symptoms in medical literature, and especially to two cases seen by Dr. Richard Cabot of Boston, a number of prominent clinicians reported similar cases that had been under their observation in recent years, though they had not realized the possibility of the independent nature of the clinical symptom complex present. These observers were from various and distant parts of the country, from Toronto, Buffalo and Boston to Los Angeles. It seems evident, then, that as soon as it is realized how definite the new affection is that many other cases will be reported. We shall expect to find in the medical literature of the near future ample confirmation of these preliminary reports. It is evident that there are many such cases in existence, and we may look for examples of this new clinical entity in abundance in the literature of the near future. The suggestion of its independent nature is likely to stimulate clinical observation to the distinct credit of American medicine.

THE REVIVAL OF THE "ST. LUKE'S HOSPITAL" FRAUD.

It is only about a couple of years ago that the notorious "St. Luke's Hospital" diploma mill and general fraud found it expedient to go out of business under special stress of Michigan laws. Now it has appeared again, under another name, it is true, but evidently under the same auspices and general control and with the same policy and fraudulent practices. Since the 15th of May the mail of THE JOURNAL has been flooded with the circulars of the "Christian Hospital," 617 La Salle Avenue, Chicago, sent to it by righteously indignant correspondents. These circulars have all the characteristics of the old St. Luke's Hospital output, the same offers of staff positions, fac similes (reduced) of diplomas, promises of advertisement and offers of commissions on cases sent. The circulars outdo the St. Luke's samples in their unauthorized use of names of prominent physicians, in some cases thinly disguised; among others they brazenly *use the name of a noted Chicago surgeon as chief of staff.*

In Michigan St. Luke's Hospital flourished under the lack of state laws properly covering the offense of fraudulent diploma selling, and not until the legislature passed an act especially meant to reach it, did the concern succumb. One "Dr." A. C. Probert, who was the real manipulator of the fraud, is also prominent in the "Christian Hospital" literature, if, indeed, he is not the real "it" of the concern. While most of his associates are new, we still see the name on the roster of Dr. Charles W. H. B. Granville, who was the figurehead of the Michigan concern, and who also figured in some legal proceedings elsewhere. The boldness of these impostors in thus coming out under their real names and following the identical methods in which they had been so clearly exposed is rather striking. They probably have reckoned on a similar deficiency in Illinois statutes as that they first profited from in Michigan, and have, it would seem, cleverly timed this initiation of their work to coincide with the end of the legislative session, expecting, therefore, to have a free hand for at least the next two years. If it should indeed so happen that no existing state statute reaches the case, it would seem that the United States postal laws ought to cover such fraudulent use of the mails by such a disreputable diploma-selling concern as well as in the Armstrong case. While we have no sympathy whatever with the medical practitioner whose idiotic egotism is gratified by sticking up such a diploma in his office on the promise of unethical advertisement and exploitation of his patients, we would be glad to see honest physicians relieved from exposure to the insult that such offers necessarily imply. We have abundant evidence that a large proportion of our readers are feeling just that way. Moreover, we want to see justice done and a stigma on the fair name of any city and state where such practices are permitted removed. The sooner the end of the "Christian Hospital" comes the better.

If any of our readers have sent the concern money and have been defrauded thereby we shall be glad to hear from them.

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[1] Eichhorst, Pathologie und Therapie, vol. 1, p. 110 et seq., 1899.

SUPER-SUPERLATIVE FLATTERY.

We like to see the articles of THE JOURNAL quoted and fully credited, but we do not like to see our abstracts abstracted without credit; neither do we enjoy seeing the original matter taken bodily without so much as a thank you. Imitation is said to be the sincerest kind of flattery; actual appropriation must therefore be even super-superlative. Hence, we feel flattered in seeing an editorial which appeared in a recent issue of THE JOURNAL incorporated bodily, with only a *dozen or so verbal changes, into an editorial in one of* our Eastern contemporaries. We had credited the editor of the *Medical Times* with the ability to write his own editorials.

VACCINATION AND THE ANTIVACCINATIONISTS.

The antivaccinationists and anti-vivisectionists are still using the Cleveland example as a noted instance of the failure of vaccination and the advantages of disinfection against smallpox. It might be well to restate the facts, which seem to have been lost sight of by the general public. The disinfection did not abate the smallpox, but was followed by an epidemic of over 1,200 cases and over 200 deaths, and then Cleveland made up for its laxity by a most vigorous vaccination crusade, with a final result of stamping out the disease. While the anti-vaccinationists will still probably continue to ignore this, it is just as well once more to restate the facts. If there is anything positive in medicine it is that vaccination will stamp out smallpox.

THE IDENTITY OF SYSTEMIC BLASTOMYCOSIS AND THE SO-CALLED PROTOZOIC DISEASE.

American investigations concerning blastomycosis in man, and closely related or identical processes, have reached considerable proportions. This work begins with Gilchrist's description of his first case of blastomycetic dermatitis. Almost two score of similar cases have since been reported and the mycology often clearly set forth. The next important step consisted of the work of Rixford and Gilchrist on the so-called protozoic disease, their results showing the identity of the minute anatomy of the skin lesions in this disease and in blastomycetic dermatitis. However, it seems that Rixford and Gilchrist were in error in concluding that the micro-organism in the protozoic disease is a protozoon, for Ophüls and Moffit[1] demonstrated in a thorough manner that the organism is a *mold-fungus*. Another important feature is that the fungus of Ophüls and Moffitt, as nearly as one can tell from a published description, is identical with the Oidium hyphomycoide isolated by Ricketts[2] from several cases of blastomycetic dermatitis; Montgomery[3] also appears to have obtained the same organism from a similar case. The apparent identity of the organisms is strongly suggestive of the identity of the two diseases. Of interest in this connection is the report of a case of "Systemic Blastomycosis," by Ormsby and Miller,[4] the infection atrium being apparently in the lungs. Without entering into details it may be stated that the course of the disease and the autopsy findings are identical with those of certain cases of the protozoic disease. The clinical history was very similar to that of generalized tuberculosis, the autopsy disclosing small abscesses and tumor- and tubercle-like formations in visceral organs. In addition, the organism cultivated by Ormsby and Miller from their case seems identical with that of Ophüls and Moffitt. So one could say that either the Ophüls and Moffitt case was one of blastomycosis, or that of Ormsby and Miller was a case of the protozoic infection. The latter authors failed to draw attention to this probable identity in their report. Our obdurate colleagues in Germany probably will continue to consider this disease (blastomycetic dermatitis) the creation of an imaginative (American) mind, until they have succeeded in determining a case in the "Vaterland." A German critic (Kromayer) is able to recognize only one case of true blastomycetic infection in man, and that was a systemic infection described by Busse and Buschke. This position is in part due to the well-known German ignorance of scientific work in America.

Medical News.

ILLINOIS.

St. Francis' Jubilee.—The twenty-fifth anniversary of the formal opening of St. Francis' Hospital, Peoria, was formally celebrated last week.

Smallpox.—There are said to be 20 cases of smallpox at Dalton, and in default of an isolation hospital, guards have been posted at the homes where the disease exists.

Personal.—Dr. Edith Fyffe, Chicago, has returned from Europe.——Dr. Nicholas Senn, Chicago, reached New York, May 15, on his return from Madrid.——Dr. W. G. Willard, Chicago, major and surgeon Illinois National Guard, assigned First Infantry, has resigned.——Dr. Ben D. Baird has been made health officer of Galesburg.——Dr. Alfred C. Phillips, Apple River, was taken ill in New Orleans, May 6, and was removed to the Louisiana Retreat.

Chicago.

Pneumonia Deaths.—This disease caused 172 of the total 586 deaths recorded during the week ended May 16, from all diseases—excluding the 46 from suicide and violence. This was nearly one-third (29.3) per cent. Since the first of the year there have been 2,659 deaths from pneumonia and 1,190 from consumption, or nearly 125 per cent. more from pneumonia.

Increased Requirements.—Rush Medical College, beginning with this summer, will demand 12 majors, in addition to a four years' high school course; one-half of these must be in special preparatory studies for medicine and must include chemistry and elementary biology. In June, 1904, the requirements will be further increased and a year later the completion of the junior college course or its equivalent will be required.

Old Milk and Infant Mortality.—The health department reports 184 deaths of children under 5 years of age during last week, as against 138 during the previous week—an increase of exactly one-third, 33.3 per cent.; and as against 128 in the corresponding week last year—an increase of 43.7 per cent. The length of time between the drawing of milk and its delivery and use is considered a cause. Thousands can not afford ice and preservatives will add to the injuriousness of the milk. The Bulletin of the health department refers to the great improvement in milk quality in the past six years and the lessened death-rate among infants and urges continued enforcement of regulations looking toward pure milk.

IOWA.

New Graduates.—Keokuk Medical College, at its sixty-sixth annual commencement, April 28, conferred degrees on a class of 56.

Personal.—Dr. David S. Fairchild, formerly of Clinton, has removed to Des Moines and has been appointed dean of the medical department of Drake University.

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[1] Philadelphia Med. Jour., 1900, v, 1471.

[2] Jour. of the Boston Soc. of Med. Sciences, 1901, v, 453.

[3] JOURNAL A. M. A., 1902, xxviii, 1486.

[4] The Journ. of Cutaneous Diseases, March, 1903.

Itinerant Abandons Fight.—"Dr." B. P. Rea, an itinerant medicine man who was indicted a year ago for practicing without license and was fined $300 and costs, gave notice of appeal and threatened to demonstrate the unconstitutionality of the law under which he was convicted, by carrying the case to the Supreme Court. Wiser counsels have prevailed, however, and he has now paid the fine and costs, amounting to about $318.

MARYLAND.

Baltimore.

Want Good Milk.—The new Baltimore Pediatric Club held a meeting, May 21, to launch a crusade for better milk. Addresses were made by Dr. Henry L. Coit of Newark, N. J., and by Drs. Osler, C. W. Mitchell, C. Hampson Jones and Bassett of Baltimore.

The mortality for the week was low, 165, being 15.90 per 1,000, and for the whites only 13.72. Pneumonia caused a large proportion of deaths, 19, being exceeded by consumption by but one. Seven new cases of smallpox were reported and 33 of scarlet fever.

MASSACHUSETTS.

Appointments.—At the Boston City Hospital, Dr. John N. Coolidge has been appointed medical registrar, and Dr. George A. Leland, visiting aural surgeon.

Bequests.—John L. Day, Quincy, left $5,000 to the Quincy Hospital, and the same amount to the Carney Hospital, Boston, and to St. Mary's Infant Asylum.

Death and Infection.—For the week ending May 9 210 deaths occurred, equivalent to an annual death-rate of 18.68 per 1,000. Pneumonia caused 30; whooping cough, 5; heart disease, 22; bronchitis, 6; tuberculosis, 29; diphtheria, 4, and violence, 12 deaths. Of infectious diseases there were reported: diphtheria, 40 cases; scarlet fever, 33; typhoid fever, 16; measles, 31, and tuberculosis, 25.

Tuberculosis Increasing Among Hebrews.—The United Hebrew Benevolent Society, Boston, has discovered that tuberculosis is rapidly increasing among the Hebrews of Boston. The society is taking active measures for bettering the crowded conditions in the midst of which many Hebrews live, and to which the spread of this disease is attributed. Six of the 17 cases reported to them this last year were sent to the Hebrew Hospital in Denver.

Boston.

Boston's mortality for the week ending May 15 was 20.37. The largest elements were pneumonia, 39; heart disease, 26; tuberculosis, 26; diphtheria, 6; bronchitis, 5. The prevalence of contagious diseases is indicated by the report of 38 new cases of diphtheria, 45 of scarlet fever, 18 of typhoid fever and 53 of measles.

Report on Insane.—The trustees of the Boston Insane Hospital report that they have under their care 1,771 patients, of whom only 543 are in the institution directly under their supervision. Several new buildings are being constructed to relieve the crowding here, but the provision is far from sufficient. They urge the great injustice of compelling relatives and friends to travel the long distances necessary to get to the state institutions which are themselves far too much crowded. The net cost per week per patient was $4.05.

MISSOURI.

Baker Retains License.—On April 27 the State Board of Health decided that the charges against Dr. Charles M. Baker of Santa Fe were not well enough founded to justify taking away his license. He was, therefore, exonerated.

Examining Board.—At the session of the State Board of Medical Examiners in Kansas City, April 28, one candidate appeared, was rejected, and the board adjourned. At the previous session, April 1, the board examined 21 applicants.

Medical Student Commits Suicide.—Gaston M. Jordan, Caruthersville, a junior student at Memphis (Tenn.) Hospital Medical College, despondent over his failure to pass the senior grade examinations, committed suicide, April 30, by taking two ounces of chloral.

Leper Found in Laundry.—Dong Gong, the Chinese leper of St. Louis, of great notoriety, who escaped from quarantine two days before, was captured, May 7, in a Chinese laundry. Patrons of the laundry were in great alarm and in many cases are said to have made bonfires of the clothing washed there. The proprietor has been compelled to leave the neighborhood.

NEW YORK.

Graduation Exercises.—The seventy-second annual commencement exercises at Albany Medical College were held May 5, when 34 young physicians received diplomas from Chancellor Van Vranken of Union University.

The Ithaca Epidemic.—Dr. George Soper of the State Board of Health reports on the Ithaca epidemic that "so far as can be said at present, there have been 955 cases and 64 deaths. This ranks the epidemic among the most important in modern times in this part of the world." Twenty-nine of the deaths were of Cornell students.

Grip, Pneumonia and Nephritis.—The bulletin of the State Board of Health for March says that the state is at present in the course of an annually recurring epidemic of grip. A few deaths were reported as early as October, but the estimated mortality was not above 500 until January, when it was placed at 1,200 for the month, and for February it was increased to 1,500. The mortality of March was increased 2,000 by this disease. Separate record has not been kept of pneumonia save for the past two years. It was the cause of 8,800 deaths in 1902, or a little over 50 per cent. of the reported acute respiratory mortality. In January there were 1,223 deaths, in February 1,133, in March 1,290. Nephritis caused 726 deaths in March, a decrease from last month.

Buffalo.

Bond Issue Authorized.—The state legislature has passed a law granting Buffalo the privilege of issuing bonds for $500,000 for the improvement and extension of the water system.

Personal.—Dr. Charles G. Stockton went to New York to attend the dinner given by Dr. Max Einhorn in honor of Professor Ewald of Berlin.——Dr. Irving P. Lyon is in the Adirondacks.——Dr. Harvey R. Gaylord of the Gratwick Cancer Laboratory has typhoid fever.

Hospital Appointments.—Drs. Edward Drozeski, Hyatt Regester, Thew Wright and Fred Parmenter have been appointed resident physicians at the Buffalo General Hospital.——Drs. Elliott Bush, C. J. Roberts and Albert Bixby have been appointed resident physicians at the Erie County Hospital.

PENNSYLVANIA.

To Lessen Child Labor.—A bill passed by the legislature raising the age limit of children employed in the coal mines from 14 to 16 has been approved by the governor.

Food Laws Violated.—Dairy and Food Commissioner Warren has ordered 24 prosecutions in various parts of the state for violations of the laws relating to dairy and food products. Of this number 14 are in Allegheny.

Philadelphia.

John Herr Musser.—In the account of the new President of the American Medical Association in THE JOURNAL, May 16, his name was given as John Henry Musser. It should have been John Herr Musser.

Anthrax has appeared among a herd of 50 cows on the dairy farm of Albert Zimmerman in the outskirts of the city. The Bureau of Milk Inspection has placed the farm under quarantine and has ordered an inspection of all the dairy farms near the city.

Playgrounds.—The grounds of 35 public schools in different parts of the city will be opened by the board of education on July 1, for a period of two months, as playgrounds for children. Kindergarten teachers are appointed to direct the children at play, at a salary of $40 per month each.

Death and Disease Report.—There were 474 deaths in Philadelphia for the week ended May 16, as against 396 for the corresponding week of last year. Of diphtheria there were 64 new cases and 7 deaths; scarlet fever 93 new cases, 3 deaths; typhoid 247 cases, 27 deaths; smallpox 30 cases, 1 death.

Sweatshop Crusade.—Local factory inspectors have begun an active crusade against manufacturers of clothing whose employes are compelled to work in unsanitary shops. Investigation has shown that young women and girls are compelled to work in crowded quarters without regard to sanitary precautions, and also that many of these sweatshop employes are under the age limit of 13. Warrants have been issued for the arrest of several employers.

Medical Club Reception.—On the evening of May 15 the Medical Club, several hundred in number, gave a reception at the Hotel Bellevue in honor of Prof. J. von Mikulicz-Radecki of Breslau, Prof. C. A. Ewald of Berlin, Prof. Hans Kehr of

Holberstadt, Prof. Hermann Tillmans of Leipsic, Mr. Moynihan of Leeds, England, Professor Adami of Montreal, and Dr. George H. Simmons of Chicago. The guests of honor all spoke earnestly of the courtesies shown them on the occasion, the foreign visitors especially of the hospitality lavished on them throughout their stay in America. The reception was preceded by a dinner at the University Club, at which Dr. E. E. Montgomery, president of the Medical Club, was the host.

The New Director of Health.—The mayor has appointed, as the director of the new Department of Public Health and Charities, Dr. Edward Martin. Dr. Martin was born in Philadelphia in 1859. He received A.B. and A.M. degrees from Swarthmore College, and was graduated from the medical department of the University of Pennsylvania in 1883. He is professor of clinical surgery at the University of Pennsylvania and surgeon at the Howard, St. Agnes', Philadelphia and University hospitals. He was surgeon of the Third Regiment in the Spanish-American War, was appointed brigade surgeon by President McKinley, and was afterward made sanitary inspector of the Fourth Army Corps. Dr. Martin has written several medical text-books and has made other contributions to medical literature. Dr. Martin has appointed as chief of the bureau of health, Dr. A. C. Abbott, professor of hygiene at the University of Pennsylvania; as chief resident physician of the Philadelphia Hospital, to succeed the late Dr. Daniel E. Hughes, Dr. Montgomery H. Biggs, formerly chief resident physician of the University of Pennsylvania Hospital. The following eminent physicians are invited to act as a consulting board to the department: Dr. S. Weir Mitchell, J. William White and John H. Musser of the University of Pennsylvania; Dr. Charles B. Penrose of the Gynecean Hospital; Dr. Hobart A. Hare of the Jefferson Medical College, and Dr. J. M. Anders of the Medico-Chirurgical College. Dr. Martin's ability and the high character of his appointments inspire the belief that his administration marks a new era in the sanitary regulations of Philadelphia, in the conduct of the Philadelphia Hospital, and in all that pertains to the health of the city.

GENERAL.

Navy Stops Recruiting.—Because of overcrowded conditions and some contagious diseases on receiving ships, the naval department has ordered all recruiting stopped till further notice. The present enlisted force is within about 2,000 of the maximum allowed by law, 31,000.

Marine-Hospital Appointments.—Examination for the positions of assistant surgeon of the U. S. P. H. and M.-H. S. will be held June 15 at Washington. Candidates must be between 22 and 30 years of age, and graduates of reputable medical colleges. The test is partially in writing on the usual medical subjects and partially clinical, at a hospital. Further information may be had of Dr. Walter Wyman, surgeon-general, Washington, D. C.

FOREIGN.

Measles in Fiji.—A severe epidemic of measles is reported in the Fiji Islands.

The Peru plague outbreak seems at present to be at an end. Some have expressed doubts as to its having been plague at all.

Mazatlan Uses Oil Against Plague.—To prevent another outbreak, Mazatlan authorities are using petroleum on streets and houses to ensure the death of all plague germs that may remain.

Further Research on Malaria in the Congo.—The king of Belgium has sent $2,500 to the Liverpool School of Tropical Medicine to be devoted to the study of malaria in the Congo region.

Recrudescence of the Plague.—An exchange quotes the following figures to show the spread of the plague in India. During the month of February, 1899, the total deaths from plague throughout India were 12,000. During the same month in 1900 the figure was 11,000; in 1901, 34,000; in 1902, 86,000, and in 1903, 112,000.

Correspondence.

Fraudulent Use of Dr. Murphy's Name.

Chicago, May 19, 1903.

To the Editor:—I received your letter to-day with the literature from the "Christian Hospital" inclosed. I would say that your letter was one of hundreds which I have received, containing the same kind of literature. As far as I am able to determine, all of the states west of the Mississippi have been flooded with the publications of the "Christian Hospital." I would say, further, that my name was used without either my knowledge or consent, and that this literature was sent out during my absence from the city. I do not know, and have never seen, to my knowledge, a single man whose name is mentioned in the list of the "staff"; I see in there a number of the names which were used in a scheme similar to this one in connection with the "St. Luke's Hospital, Niles, Michigan," scheme, where Dr. Senn's name was used, and also one in which the name of Dr. E. O. Kinsman of Cambridge, Mass., was used in a similar way. J. B. Murphy.

Deaths.

John P. Bryson, M.D. Humboldt Medical College, St. Louis, 1868, professor of genito-urinary surgery in the medical department of Washington University, died at his home in St. Louis, May 5, from heart disease, after an illness of five days, aged 57.

Israel Pattison, M.D. University of Buffalo, 1867, for many years surgeon of the Great Western Railway, at Oelwein, Iowa, died at his home in that place, April 26, from brain disease, after an illness of two weeks, aged 62.

William J. Burgess, M.D. University of St. Louis, Mo., 1847, died at Quincy, Ill., April 7.

Deaths Abroad.

J. B. V. Laborde, M.D., Paris, 1864, director of the physiologic department and of the laboratory of anthropology, inspector of the private sanatoria of the Seine, editor of the "Tribune Médicale" for thirty years and president of the French Association of the Medical Press, died at Paris, April 5, aged 73. Among his numerous contributions to science are various works on physiology, on chloroform, intoxication with different poisons and extensive research on the application of the experimental method to the study of biology. He has lately been a leader in the campaign against the use of white lead and the abuse of alcohol. His world-wide fame, however, rests on his method of resuscitation of the apparently dead from drowning, poisoning with gas, etc., by rhythmic tractions of the tongue. As the "Gazette Medicale de Paris" remarks, "this was a true discovery, by a true scientist, and popularized by a true journalist."

Medical Organization.

Reorganization in Texas.

The Texas State Medical Association met in San Antonio, April 28-30. At the meeting in 1902 the committee appointed at the previous annual meeting to consider and report on a new plan of organization had failed to agree, presenting a majority and minority report, both more or less at variance with the Association plan. A little feeling was engendered in discussing these reports, but this had disappeared during the year, and even before the session was called to order it was evident that a spirit of harmony and unity was in the air. Much of this good feeling was due to the peace-making work of the San Antonio District Medical Society, and similar efforts on the part of the medical journals of the state, and of individual members.

At the first meeting the subject of reorganization was referred to a large committee composed of one delegate from each county represented. After patiently going over the constitutions and by-laws proposed by the American Medical Association for both state and county societies, section by section, this committee reported unanimously in favor of the uniform plan without change, and it was adopted without a dissenting voice, with genuine enthusiasm.

Texas has 270 counties and about 6,000 physicians. The state was divided into fifteen districts, with councilors in each as follows:

First District, S. T. Turner, El Paso; Second, P. C. Coleman, Colorado; Third, D. P. Fly, Amarillo; Fourth, C. M. Alexander, Coleman; Fifth, W. B. Russ, San Antonio; Sixth, A. E. Spohn, Corpus Christi; Seventh, T. B. Bennett, Austin; Eighth, Walter Shropshire, Yoakum; Ninth, J. T. Moore, Galveston; Tenth, B. F. Calhoun, Beaumont; Eleventh, R. S. Burroughs, Buffalo; Twelfth, W. R. Blailock, McGregor; Thirteenth, J. H. McCracken, Mineral Wells; Fourteenth, C. E. Cantrell, Greenville; and Fifteenth, Holman Taylor, Marshall.

Under a special resolution the council was appointed by the president to serve for one year, when the new house of delegates will elect regularly. The council organized promptly, electing J. T. Moore of Galveston chairman and W. B. Russ of San Antonio secretary, and after full discussion mapped out an active campaign for the year. On the recommendation of the council the secretary of the association was instructed to have 5,000 copies each of the constitution and by-laws for state and county societies printed for free distribution to the profession of the state, and he was authorized to issue charters to county societies until the next annual meeting, on recommendation of the council. It was also provided that new members of county societies joining between now and the next annual meeting who pay their state dues in advance, shall have credit for such dues for 1904, practically obtaining membership for two years by paying for one year. Texas has an unusually strong and progressive medical profession. Its new practice act is just being put into operation, and with the new organization, which has the promise of united support from every section, it can and ought to lead in every helpful reform in which it takes an interest.

The following officers were elected: President, Dr. Frank Paschal, San Antonio; vice-presidents, Drs. Ferdinand E. Daniel, Austin, Alfred L. Hathcock, Palestine, and Joseph D. Becton, Greenville, and orator, Dr. Henry A. Barr, Beaumont.

J. N. McCormack.

Societies.

COMING MEETINGS.

South Dakota State Medical Society, Mitchell, May 27-28.
Connecticut Medical Society, Hartford, May 27-28.
West Virginia State Medical Association, Charleston, May 26-28.
Indian Territory Medical Association, South McAlester, June 2-3.
Medical Society of the State of North Carolina, Hot Springs, June 2.
Ohio State Medical Society, Dayton, June 3-5.
Rhode Island Medical Society, Providence, June 4.
Wisconsin State Medical Society, Milwaukee, June 3-5.
Maine Medical Association, Portland, June 3-5.
Indiana State Medical Society, Richmond, June 4-5.
Medical Society of Delaware, Dover, June 9.
Massachusetts Medical Society, Boston, June 9-10.
Michigan State Medical Society, Detroit, June 11-12.
Minnesota State Medical Society, St. Paul, June 17.
Medical Association of Montana, Helena, June 17-18.
Medical Society of New Jersey, Asbury Park, June 23-25.

Kansas Medical Society.—At the thirty-seventh annual meeting held in Concordia, May 6, 7 and 8, the following officers were elected: Dr. William E. McVey, Topeka, president; Drs. George W. Coffey, Concordia, and John T. Axtell, Newton, vice-presidents; Dr. Clarence C. Goddard, Leavenworth, corresponding secretary; Dr. Lewis H. Munn, Topeka, treasurer; and Dr. Samuel G. Stewart, Topeka, librarian. Topeka was selected as meeting-place for 1904.

Medical Association of the State of Alabama.—The annual meeting was held in Talladega April 21 and 22. The report of the secretary showed that 1,225 physicians of the state were members of the county societies, and that the remaining 773 were non-members. Dr. Matthew B. Cameron, Sumterville, was elected president; Dr. John R. G. Howell, Dothan, vice-president southern district; Dr. Lewis C. Morris, Birmingham, secretary; Dr. Henry G. Perry, Greensboro, treasurer, and Dr. George S. Brown, Birmingham, orator. The association will meet in Mobile in 1904.

AMERICAN GYNECOLOGICAL SOCIETY.

Twenty-Eighth Annual Meeting, held in Washington, D. C., May 12 to 14, 1903.

The President, Dr. Joseph E. Janvrin, New York, in the Chair.

An address of welcome was delivered by Dr. I. S. Stone of Washington, D. C., which was responded to by the president.

There was a symposium on the following subject:

What Shall Be the Treatment in Cases of Pregnancy Complicated by Fibroid Tumor?

The first paper, with this title, was read by Dr. Henry C. Coe, New York, who stated that fibroid tumors complicate pregnancy because they interfere with the normal development of the pregnant uterus. They cause distressing symptoms, or they jeopardize the life of the fetus or of the mother. Each case must be studied separately, and the decision as to the treatment will vary with the patient, the tumor, the experience, and bias of the surgeon. He spoke of the influence of the tumor on pregnancy, and of pregnancy on the tumor—increased growth, degenerative changes, environment, etc. He mentioned three "semesters" of pregnancy:

1. Up to the fourth month. (a) Empty the uterus in the case of large interstitial or broad ligament tumors, or where they are situated in the lower uterine segment. Also in cases of impacted intrapelvic growths. Cases were cited in point. (b) Small tumors should be enucleated per vaginam, if possible, though pregnancy will usually be interrupted. Intrauterine polypi should be removed, if accessible. (c) Enucleation should be done by the abdominal route. Subperitoneal pedunculated growths should be removed. (d) Impacted growths should be liberated under anesthesia, when no adhesions are present, and they should be kept out of the pelvic cavity until they are kept out of the way by the growing fetus. The wishes of the patient should be followed, so far as this can be done with safety.

2. Fourth to seventh month. The location of the tumor is important, as well as its size and variety. Pain and pressure symptoms furnish indications for treatment. (a) Large interstitial growths. The uterus may be emptied, although the danger of hemorrhage from such a course is greater. (b) He advises enucleation by the abdominal route, and spoke of the propriety of removing multiple small tumors which do not encroach on the uterine cavity. (c) the patient should be kept under observation. The patient may go to full term and be delivered normally. (d) Impacted tumors, pressing on the bladder, bowel, ureter, may call for radical operation. (e) Twisted pedicle, degeneration of tumor, disease of the adnexa, peritonitis, etc., may require interference without reference to pregnancy.

3. After sixth month. Viability of the fetus should be obtained, if the life of the mother is not actually jeopardized. Can the woman be delivered at term? Yes (a) with subperitoneal growths, if they are not too large, and favorably situated. (b) Small interstitial fibroids, if they are not in the lower uterine segment. (c) Polypi presenting at the os can be easily removed at any time. After the eighth month the Porro-cesarean operation, suprapubic amputation or hysterectomy should be performed, preferably by election, i. e., before full term.

Conservatism should be practiced here, as in other gynecological operations, but not carried to extremes.

The author discussed the question of marriage and subsequent risks of pregnancy in women with fibroids. He said the time for conservative surgery is often before there is a chance of conception. In general, if a fibroid is to be regarded as a menace to life before pregnancy, the condition must be still more grave after conception occurs. Is it not the duty of the gynecologist to ward off this danger?

Officers for the Ensuing Year.

The following officers were elected: President, Dr. Edward Reynolds, Boston, Mass.; vice-presidents, Drs. J. Whitridge Williams, Baltimore, and Edward P. Davis, Philadelphia; secretary, Dr. J. Riddle Goffe, New York (re-elected); treasurer, Dr. J. Montgomery Baldy, Philadelphia (re-elected). The next session will be in Boston, May 24 to 26, 1904.

Only a small portion of the report of this society is given this week, because of the space given to the minutes of the American Medical Association session.

(To be continued.)

AMERICAN MEDICAL ASSOCIATION.

Proceedings of the Fifty-fourth Annual Session, held at New Orleans, May 5, 6, 7 and 8, 1903.

Correction to Minutes of House of Delegates.

The following correction in the minutes, as published in THE JOURNAL last week, must be made. On p. 1378, under the heading, "Dental and Pharmaceutic Members Provided For," it should have been stated that a by-law was adopted, which was worded as follows, and which will be incorporated in the Constitution and By-laws in the future:

> Dental and pharmaceutic members shall enjoy the same privileges as regular members and be subject to the same conditions.

OFFICIAL MINUTES OF THE SECTIONS.

As Rendered by the Respective Secretaries or Stenographers.

Section on Practice of Medicine.

TUESDAY, MAY 5.

Address of the Chairman, W. S. Thayer, Baltimore.

"Restorative Influence of Ozone on the Blood." G. Lenox Curtis. Discussed by F. A. Weber, Milwaukee.

"The Boy's Venereal Peril." Ferd. C. Valentine, New York. Discussion by J. J. Walsh, New York; F. W. Robbin, Michigan; DeLancey Rochester, Buffalo, N. Y.; Theodore Potter, Indianapolis; M. M. Smith, Texas; Frank A. Jones, Memphis; E. L. Stevens, Iowa; W. Shropshire, Texas, and Ferd. C. Valentine.

"Continued Fever, Neither Malarial nor Typhoid; a Clinical Study." T. J. Happel, Trenton, Tenn.

"Southern Fevers." William Krauss, Memphis, Tenn.

"Clinical Observation of Ninety Cases of Typhoid Fever, with Four Deaths, with Special Reference to Therapeutic Fasting." R. M. Harbin, Rome, Ga.

"Typhoid Fever at High Altitudes, with a Résumé of 600 Cases." J. N. Hall, Denver.

Discussion on the above four papers by T. B. Futcher, Baltimore; James Tyson, Philadelphia; J. A. Witherspoon, Nashville, Tenn.; C. F. Mason, U. S. A.; R. W. Lindson, Little Rock, Ark. Discussion of last four papers to be continued with the Symposium on Typhoid Fever on Thursday morning.

The Committee on Nominations was announced as J. H. Musser, Philadelphia; William Krauss, Memphis, and Thomas McCrae, Baltimore.

WEDNESDAY, MAY 6.

"Weakness and Dilatation of the Heart Due to Chronic Nutritional Diseases." G. W. McCaskey, Fort Wayne, Ind. No discussion.

"Limitations of Non-Surgical Treatment in Intestinal Obstruction." J. R. Eastman, Indianapolis. No discussion.

"The Occurrence of Strongyloides Intestinalis in the United States." M. L. Price, Baltimore. Discussion by C. W. Stiles, Washington, D. C.; A. J. Smith, Galveston, Texas; Ohlmacher, Ohio, and J. T. Moore, Galveston, Texas.

"Clinical Diagnosis of Intestinal Parasites." C. W. Stiles, Washington, D. C.

"Uncinariasis in the United States, with Especial Reference to Its Occurrence in Texas." Allen J. Smith, Galveston, Texas.

"Treatment of Uncinariasis." T. A. Claytor, Washington, D. C.

Discussion on the last three papers by W. G. Harrison, Alabama; E. D. Bondurant, Mobile, Ala.; C. A. Moore, Alabama; G. W. McCaskey, Fort Wayne, Ind.; T. A. Williams, Edinburgh, Scotland; Claud A. Smith, Atlanta, Ga.; James B. Herrick, Chicago; William Britt Burns, Memphis, Tenn.; C. W. Stiles, Washington, D. C.; A. J. Smith, Galveston, Texas, and T. A. Claytor, Washington, D. C.

"Bacillary Dysentery." C. F. Mason, Fort Sam Houston, Texas.

"Contribution to the Study of the Summer Diarrheas of Infancy." J. Mason Knox, Baltimore.

"Malarial Dysentery." William Britt Burns, Memphis, Tenn.

"The Clinical History and Pathology of Amebic Dysentery." H. F. Harris, Atlanta, Ga.

"A Study of the Cases of Amebic Dysentery Occurring at the Johns Hopkins Hospital." T. B. Futcher, Baltimore.

"The Treatment of Acute Dysentery." J. M. Anders, Philadelphia.

Discussion on the above six papers by Alexander Lambert, New York; T. B. Dabney, New Orleans; J. T. Moore, Galveston, Texas; W. Shropshire, Yoakum, Texas; C. F. Mason, Fort Sam Houston, Texas; J. H. Mason Knox, Baltimore; William Britt Burns, Memphis, Tenn.; H. F. Harris, Atlanta, Ga.; T. B. Futcher, Baltimore; J. M. Anders, Philadelphia.

"Abdominal Pain in Pleurisy and Pneumonia." James B. Herrick, Chicago. Discussion by J. N. Hall, Denver; T. McCrae, Baltimore; J. M. Anders, Philadelphia; B. W. Sibley, Chicago, and J. B. Herrick, Chicago.

"Traumatic Pneumonia." W. T. English, Pittsburg, Pa.

THURSDAY, MAY 7.

COMBINED MEETINGS WITH SECTION ON HYGIENE AND SANITARY SCIENCE.

"The Sources and Manner of Infection of Typhoid Fever." William H. Welch, Baltimore.

"Prophylaxis of Typhoid Fever." John S. Fulton, Baltimore.

Discussion on the above two papers by John H. Musser, Philadelphia; DeLancey Rochester, Buffalo, N. Y.; William Krauss, Memphis; Frank Warner, Ohio; J. N. Hurty, Indianapolis; Sewell, Denver; E. J. Roberts, Nashville, Tenn.; C. F. Adams, New Jersey; James Tyson, Philadelphia; J. J. Walsh, New York; Walter Shropshire, Texas; T. J. Happell, Trenton, Tenn., and John S. Fulton, Baltimore.

"The Mode of Transmission of Yellow Fever." James Carroll, U. S. A. Discussion by Stanford E. Chaillé, Edmond Souchon, Q. Kohnke and Felix Formento, New Orleans; C. W. Stiles, Washington, D. C., and James Carroll, U. S. A.

The following officers were elected: Chairman, Alexander Lambert, New York; secretary, J. S. Miller, Chicago.

"Sources and Manner of Infection of Plague." W. J. Calvert, St. Louis.

"Prophylaxis of Plague." J. J. Kinyoun, Philadelphia.

Discussion on the two above papers by F. G. Novy, Ann Arbor, Mich.; E. Richford, San Francisco, and W. J. Calvert, St. Louis.

"Arthritis Deformans." Thomas McCrae, Baltimore. Discussion by J. J. Walsh, New York; J. T. Moore, Galveston, Texas; E. E. Skinner, New Haven, and Thomas McCrae, Baltimore.

"Albuminuria in Diabetes; Its Etiology and Importance as a Factor in the Production of Diabetic Coma." Arthur R. Elliott, Chicago. Discussed by William Krauss, Memphis, Tenn.; F. R. Weber, Milwaukee, and Elliott, Chicago.

FRIDAY, MAY 8.

A committee to appoint a member to the House of Delegates was named as follows: H. L. Sullivan, Mississippi; William Krauss, Tennessee, and T. B. Futcher, Maryland. They reported in favor of Frank A. Jones, Tennessee.

"The *Passing of Chronic Rheumatism*." J. J. Walsh, New York. Discussion by James Tyson, Philadelphia; Thomas McCrae, Baltimore; Alexander Lambert and J. J. Walsh, New York.

"Hemoglobinuric Fever; Its Cause and Treatment." Walter Shropshire, Yoakum, Texas. Discussion by William Krauss, Memphis, Tenn.; Barnes, Louisiana; Frank A. Jones, Memphis, Tenn.; Southerland, Mississippi; L. A. Jabra, Tennessee; James B. McElroy, Mississippi; W. S. Thayer, Baltimore; Williams, Edinburgh, Scotland, and Walter Shropshire, Texas.

"Some Clinical Aspects of Tubercular Peritonitis." Joseph Eichberg, Cincinnati. No discussion.

"Tuberculosis in the Negro." Seale Harris, Union Springs, Ala. No discussion.

"Should the Tuberculosis Patient Know the Truth Regarding His Condition?" C. P. Ambler, Ashville, N. C. No discussion.

Adjourned.

Section on Obstetrics and Diseases of Women.

TUESDAY, MAY 5—AFTERNOON.

Meeting called to order at 2 p. m. by the Chairman, A. Palmer Dudley.

L. H. Dunning took the Chair while the Chairman read his address entitled "The Trend of Gynecological Work To-day."

On motion a vote of thanks was extended to the chairman for his very able paper.

On motion of F. Lawrence a committee of three was appointed to draft a suitable memorial on the death of W. E. B. Davis. The Chair appointed Drs. Lawrence, Cordier, Rogers, Carstens,

H. P. Newman followed with a paper on "Appendicitis from the Standpoint of the Gynecologist." Discussed by Reynolds, E. Ricketts, Wathen, Michinard, Manton, Bacon, Carstens, Thienhaus, Bovée, Massey, Lewis, McCollum, Lawrence, Craig.

"Gastric Ulcer, Some Clinical, Pathologic and Surgical Phases of," was the title of a paper read by A. H. Cordier. Discussed by J. H. Carstens, Clark, Thienhaus, Lawrence, Cordier.

On motion of Dr. Bonifield the papers of Drs. Haggard and Ricketts are to be called for the first thing in the morning session and in the event of absence of essayists, the papers are to be placed at the end of the list.

The Chair appointed the following Nominating Committee: H. P. Newman, J. H. Carstens, Lewis, H. O. Pantzer, J. G. Clark.

WEDNESDAY MAY 6—MORNING.

The Section met at 9 a. m. and was called to order by the Chairman, A. Palmer Dudley.

The first paper, entitled "Infected Gall Bladder Contents, with or without Gallstones," was read by Edwin Ricketts. Discussed by L. H. Dunning, C. V. Thienhaus, Thompson, Halderman, H. O. Marcy, A. Palmer Dudley, Ricketts.

H. O. Marcy read a paper on "The Better Methods for the Repair of the Perineal Structures." Discussed by Drs. Goelet, Dunsmore, Hayden, Graham, Gibbons, Dorsett, Carstens, Dudley, Marcy.

"The Repair of Cystocele by Utilization of the Anatomic Attachments of the Anterior Vaginal Wall" was the title of a paper read by E. Reynolds. Discussed by H. O. Marcy, Thienhaus, Bovée, and Reynolds in closing.

"Lacerations of Cervix" was the title of a paper read by Daniel H. Craig. Discussed by G. B. Massey, R. W. Holmes, Hayden, Bacon, Dunsmore, Craig.

J. H. Carstens read a paper entitled "The Hygiene of Young Girls."

F. Lawrence followed with a paper on "Pelvic Diseases in Young Girls."

Both the above papers were discussed by L. S. McMurtry, Graham, Massey, Bonifield, Carstens and Lawrence.

WEDNESDAY, MAY 6—AFTERNOON.

Meeting was called to order at 2 p. m. by the Chairman.

C. S. Bacon presented the following resolution:

"*Resolved*, That the officers of this Section be instructed to arrange future programs so far as possible for an equality both in number and arrangement of obstetric and of gynecologic papers." On motion discussion of this resolution was deferred until the afternoon session, Thursday.

A. H. Goelet followed with a paper on "Fixation of the Prolapsed Kidney." Discussed by Drs. Wagner, Dunning, Ricketts, Clark, Bonifield, Craig, Goelet.

J. G. Clark read a paper entitled "A Combined Clinical and Laboratory Study of the Effects of Peritoneal Saline Infusions in Abdominal Operations." Discussed by Drs. Bovée, Stacey, Lawrence, Bonifield, Ricketts, Thienhaus, Showalter (?), Wagner, Clark.

L. H. Dunning read a paper on "Retroversion of the Uterus; A Clinical Study of the Symptoms, Complications and Treatment."

J. Wesley Bovée contributed a paper entitled "A Further Report on Operations on the Utero-Sacral and Round Ligaments for Retroversion of the Uterus."

Discussion on these papers was participated in by Drs. Massey, Lewis, Dorsett, Milliken, Thienhaus, Carstens, Showalter, Marcy, Ricketts, Lawrence, Hall, Dudley, Dunning and Bovée.

Thursday, May 7—Morning.

Section called to order at 9:30 a. m. by the Chairman.

The first paper read was that of T. S. Cullen, entitled "Sarcomatous Degeneration of Myomata." Discussed by J. G. Clark, L. H. Dunning, C. O. Thienhaus, C. L. Bonifield, Cullen.

O. G. Pfaff followed with a paper on "Ectopic Gestation; Imbibited Tubal Peristalsis a Cause. Report of a Case with Remarks." Discussed by L. H. Dunning, H. Ehrenfest, G. B. Massey, J. H. Carstens, F. Lawrence, C. O. Thienhaus, A. P. Dudley, T. J. Beattie and Pfaff.

R. W. Holmes read a paper entitled "Non-Absorbent Gauze; The Proper Material for Tamponades for Hemorrhage, with Special Reference to Obstetrics." Discussed by C. S. Bacon, C. O. Thienhaus, Showalter, H. Ehrenfest, W. P. Manton, S. C. Gordon, H. J. Stacey, Pierce, R. Wier, E. V. Davis, G. N. Ryan, Showalter, Holmes.

Wm. P. Manton read a paper entitled "Acute General Staphylococcus Infection Through the Puerperal Breast." Discussed by Drs. Jamiston, C. S. Bacon, E. V. Davis, R. W. Holmes, Wm. P. Manton.

Thursday, May 7—Afternoon.

Section called to order at 2:30 p. m. by the Chairman.

H. P. Newman, Chairman of Nominating Committee, reported as follows: Chairman, L. H. Dunning, Indianapolis; secretary, C. L. Bonifield, Cincinnati; delegate, Wm. P. Manton, Detroit. Report was adopted on motion.

Dr. Bacon's resolution was taken up for consideration. Discussed by Drs. Ricketts, Carstens and Bacon. On motion the resolution was laid on the table indefinitely.

G. B. Massey read the first paper, entitled "Destructive Sterilization by Cataphoresis in Cancer of the Uterine Cervix." Discussed by Drs. Hayden, Moody, Pierce, Massey.

C. O. Thienhaus read a paper on "Advisability of Vaginal Exploratory Puncture and Celiotomy in Doubtful Diagnosis in Diseases of Female Genital Organs, with Cases." Discussed by Drs. Stacey, Craig, Carstens, Thienhaus.

H. O. Pantzer read a paper on "Conservative Surgery of the Sclerotic Ovary." Discussed by Drs. Dunning, Dudley, Pantzer.

F. Lawrence, Chairman of the Committee on Resolutions, in the matter of the death of W. E. B. Davis, presented the following resolutions:

Whereas, The late Dr. W. E. B. Davis was for many years an earnest, honest and fearless worker in the Section on Obstetrics and Diseases of Women of the American Medical Association, and

Whereas, His kindly manner, his forceful character and his masterful intellect have contributed much to the success of the Section both scientifically and fraternally, and

Whereas, He was one of the most efficient of our many chairmen; therefore, be it

Resolved, That in his death the Section loses one of its most valued and honored members; the profession loses one of its most worthy workers; the nation loses a man worthy a hero's laurels. Though dead his beneficent efforts and his scientific spirit will live in the hearts of his co-workers so long as human suffering demands patience, energy, sympathy and skill.

Resolved, That a copy of these resolutions be spread on the minutes of this Section and an engrossed copy be sent to his widow and children.

F. F. Lawrence, Chairman; J. H. Carstens, A. H. Cordier.

W. D. Haggard read a paper entitled "A Study of Intestinal Perforations in Typhoid Fever, with Report of Three Successful Operations and Collective Investigation of 295 Cases of Operation." Discussed by Ricketts and Thienhaus.

On motion a vote of thanks was extended to the Chairman and Secretary for efficient services.

Adjourned *sine die.*

Section on Surgery and Anatomy.

Tuesday, May 5—Afternoon.

The meeting was called to order at 2 p. m. by the Chairman, James E. Moore, Minneapolis.

The Chairman's address, entitled "A Plea for Exploratory Operations," was read.

H. J. Whitacre, Cincinnati, read a paper entitled "Suppression of Urine; Report of a Case Enduring Eight Days, Relieved by Decapsulation of the Kidneys."

J. R. Guthrie, Dubuque, Iowa, read a paper entitled "Fat Necrosis of the Kidney."

Alex. Hugh Ferguson, Chicago, read a paper entitled "The Surgical Treatment of Nephritis."

The Chairman then introduced Dr. Adolph Lorenz of Vienna, who spoke as follows: "I do not intend to impose on your kindness. As far as I know, some ten or fifteen minutes are accorded to every speaker. I will only take one or two minutes, just to thank you for your welcome and to wish a courteous success to the members of the Section."

The papers previously read were then discussed by the following: Arthur Dean Bevan, Chicago; Jepson, Iowa; McLaren, Minnesota; R. H. Gibbons, Scranton, Pa.; Ramon Guiteras, New York; McArthur, Chicago; F. A. Dunsmoor, Minneapolis; Winslow, Baltimore, and Whitacre and Ferguson.

B. B. Davis, Omaha, read a paper entitled "Indications for Cholecystectomy."

F. A. Dunsmoor, Minneapolis, read a paper entitled "The Call for Exploratory Operation in the Gall Bladder Region."

These papers were discussed by W. J. Mayo, Rochester, Minn.; J. B. Murphy, Chicago; A. J. Ochsner, Chicago; Hamilton, Columbus, Ohio; Richard H. Gibbons, Scranton, Pa., and Davis and Dunsmoor.

James B. Bullitt, Louisville, Ky., moved that the Executive Committee be appointed the Nominating Committee, which motion was duly seconded and carried, and the Secretary instructed to cast the ballot therefor.

Adjournment until 9:30 a. m., Wednesday.

Wednesday, May 6—Morning.

The meeting was called to order at 9:30 a. m. by the Chairman.

Van Buren Knott, Sioux City, Iowa, read a paper entitled "A Contribution to the Surgery of Gastric Ulcer."

H. D. Niles, Salt Lake City, read a paper entitled "Surgical Conception of Pyloric Obstruction."

A. J. Oschner, Chicago, read a paper entitled "Clinical Observations in Stomach Surgery."

These papers were discussed by A. H. Andrews, Chicago; W. J. Mayo, Rochester, Minn.; Carl Wagner, Chicago; William L. Rodman, Philadelphia; A. H. Cordier, Kansas City; Arthur Dean Bevan, Chicago; and Knott, Niles and Ochsner.

O. Beverly Campbell, St. Joseph, Mo., read a paper entitled "The Single Cuff Method of Circular Enterorrhaphy; A New Method."

James H. Dunn, Minneapolis, read a paper entitled "Intestinal Resection, with Report of Fifteen Cases, Nine with the Button and Six with the Suture."

These papers were discussed by Jonas, Omaha; Horsely, Texas; Walker, Detroit; J. B. Murphy, Chicago; Alex. Hugh Ferguson, Chicago, and Campbell.

Arthur Dean Bevan of Chicago made the following motion: "That the Delegates of the Section on Surgery call the attention of the House of Delegates to the fact that much surgical work, such as appendicitis, gastric ulcer, typhoid perforation and gallbladder surgery, is being at the present time duplicated in two Sections of this Association, and that the very important work of obstetrics is not being sufficiently emphasized. I move that it is the sense of the Section on Surgery that its interests would be best conserved if the surgical diseases of women were transferred to the Section on Surgery, leaving to the gynecologic Section obstetrics and the diseases of the genital organs of women. I move that the Delegates of the Section on Surgery bring this matter before the House of Delegates." This motion was duly seconded and carried.

Adjourned to 2:30 p. m.

Wednesday, May 6—Afternoon.

John T. Bottomley, Boston, read a paper entitled "Multiple Osteomyelitis."

Edward H. Nichols, Boston, read a paper entitled "Osteomyelitis."

These papers were discussed by DeForest Willard, Philadelphia; J. C. Stewart, Minneapolis; J. B. Murphy, Chicago; Richard Gibbons, Scranton, Pa., and Nichols.

John A. Wyeth, New York, read a paper entitled "The Treatment of Vascular Tumors by the Injection of Water at a High Temperature, with Suggestions as to Its Employment in Tubercular Adenitis, Abscess, Fistulous Tracts, etc." This paper was discussed by W. J. Mayo, Rochester, Minn.; John P. Lord, Omaha; Richard H. Gibbons, Scranton, Pa., and Wyeth.

William J. Mayo, Rochester, Minn., read a paper entitled "Further Experience with the Vertical Overlapping Method for the Radical Cure of Umbilical Hernia." This paper was discussed by A. J. Ochsner, Chicago; J. B. Murphy, Chicago; Wather, Louisville; Magee, Minnesota; Alex. Hugh Ferguson, Chicago, and W. J. Mayo.

W. T. Eckley, Chicago, read a paper entitled "Evolution of the Mammalian Straight Gut, with Special Reference to Peritoneal Changes Incident to Rotation." This paper was discussed by Willis, California, and Richard H. Gibbons, Scranton, Pa.

Fred. B. Lund, Boston, read a paper entitled "The Value of Enterostomy in Selected Cases of Peritonitis." This paper was discussed by Tinker, Baltimore; Miles F. Porter, Fort Wayne, Ind.; Thomas, Washington; James B. Bullitt, Louisville, Ky.; F. A. Dunsmoor, Minneapolis, and F. B. Lund.

F. D. Smythe, Memphis, Tenn., read a paper entitled "Cholecystectomy versus Cholecystorraphy and Cholecystostomy." No discussion.

Richard H. Gibbons, Scranton, Pa., read a paper entitled "Dangers Attendant on Attempt at Gaining the Period of Interval in Operation for Appendicitis." This paper was discussed by H. D. Niles, Salt Lake City; James B. Bullitt, Louisville, Ky.; A. J. Ochsner, Chicago; W. J. Mayo, Rochester, Minn.; J. B. Murphy, Chicago, and R. H. Gibbons.

Thursday, May 7—Morning.

The meeting was called to order at 9:30 a. m. by the Chairman.

DeForest Willard, Philadelphia, read a paper entitled "Sunshine and Fresh Air versus Roentgen and Finsen Rays in the Treatment of Tuberculosis of Bones and Joints."

J. Clark Stewart, Minneapolis, read a paper entitled "Epithelioma Under the X-Ray; a Preliminary Report of the Histologic Changes."

These papers were discussed by Henry A. Christian, Boston; Edward H. Nichols, Boston; Ridlon, Chicago; Fred. B. Lund, Boston; Browden, Clarksville; James E. Thompson, Galveston, Texas, and Willard and Stewart.

John E. Summers, Jr., Omaha, read a paper entitled "Varix of the Inferior Mesenteric Vein Complicated by Chronic Ulcerative Colitis; Operation." This paper was discussed by F. D. Smythe, Memphis; Milliken, Texas, and Summers.

Charles A. Powers, Denver, read a paper entitled "Congenital Dislocation of the Radius." This paper was discussed by John T.

Bottomley; Fred. B. Lund, Boston; DeForest Willard, Philadelphia, and Powers.

John P. Lord, Omaha, read a paper entitled "Acute Epiphysitis of the Head of the Femur, Causing a Condition Subsequently Simulating C[illegible]." This paper was discussed by Ridlon, [illegible], New York, and Lord.

Adjourned until 2 p. m.

Thursday, May 7—Afternoon.

The meeting was called to order at 2 p. m. by the Chairman.

The *Nominating Committee* reported the following nominations: Chairman, Charles A. Powers, Denver; secretary, E. Wyllys Andrews, Chicago; delegate, William J. Mayo, Rochester, Minn.

On motion, duly made, seconded and carried, the Secretary was instructed to cast the ballot for these candidates, and they were unanimously elected.

W. H. Earles, Milwaukee, read a paper entitled "Necessity for More Care in the Treatment of Skull Fractures." This paper was discussed by Sherrill, Louisville, Ky.; Carl Wagner and Sullivan, Chicago; B. B. Davis, Omaha; Brown, Alabama; Lemmon, Milwaukee; Witherspoon, Illinois, and Earles.

James B. Bullitt, Louisville, Ky., read a paper entitled "Epispadias; Report of a Case Treated by a Modification of Cantwell's Method." This paper was discussed by Poorham, Martin and Fenner, New Orleans, and Bullitt.

Charles A. Powers, the chairman-elect, was then introduced by the Chairman and made the following *remarks:*

Mr. Chairman and Gentlemen: To be elected the presiding officer over this large body of American surgeons is to me a great honor. To be the successor, as Chairman of this Section, of Murphy, Rodman, Ochsner, Walker, Mayo, Moore and DeForest Willard is to me very much of a compliment. However unworthy I am, however undeserving of this tribute I may be, I promise to serve you faithfully and to the very best of my ability.

Rudolph Matas, New Orleans, read a paper entitled "Cicatricial Ankylosis of the Jaws; a Contribution to Its Operative Treatment." This paper was discussed by J. B. Murphy, Chicago; Eastman, Indiana; Martin, New Orleans; A. J. Ochsner, Chicago, and R. Matas.

Arthur Dean Bevan, Chicago, read a paper entitled "Further Contribution to the Surgery of Undescended Testicle." This paper was discussed by W. T. Eckley and Carl Wagner, Chicago; Bartlett, St. Louis; A. J. Ochsner, Chicago; Rodman, Philadelphia, and Bevan.

J. B. Murphy, Chicago, read a paper entitled "Surgery of the Urinary Tract in the Female, Experimental and Clinical." This paper was discussed by McLaren, St. Paul; Goodhue, Ohio; Hart, Chicago; Taggert, Chicago; F. D. Smythe, Memphis; M. B. Tinker, Baltimore, and Murphy.

A. H. Levings, Milwaukee, read a paper entitled "Consideration of Mammary Cysts in the Early Diagnosis of Breast Tumors." This paper was discussed by B. B. Davis, Omaha; Sullivan, Chicago; Knight, Hartford, Conn.; Morton, California, and Levings.

Adjourned until Friday at 9 a. m.

Friday, May 8—Morning.

The meeting was called to order at 9 a. m.

Dr. Sexton read a paper entitled "Treatment of Fractures of the Femur in Plaster-of-Paris Casts." This paper was discussed by John P. Lord, Omaha; Grant, Denver; Brandon, Tennessee; Andrews, Mankato; Maurey, New York; Crouse and Sexton.

Miles F. Porter, Fort Wayne, Ind., read a paper entitled "The Closure of Wounds." This paper was discussed by John E. Summers, Jr., Omaha; Pearce, Kansas City; Morton, California; Perkins, New Orleans, and Porter.

T. C. Witherspoon, St. Louis, read a paper entitled "Operative Treatment of Exophthalmic Goiter." This paper was discussed by Grant, Denver; Rixford, California; Horsely, Texas, and Witherspoon.

F. G. Connell, Leadville, Colo., read a paper entitled "Subcutaneous Injections of Paraffin for Deformities of the Nose." This paper was discussed by Morton, California, and John P. Lord, Omaha.

Walter M. Spear, Rockland, Me., read a paper entitled "Abscess of the Spleen." No discussion.

E. J. Mellish, El Paso, Texas, read a paper entitled "Anesthesia." This paper was discussed by James E. Moore, Minneapolis; A. J. Ochsner, Chicago; M. B. Tinker, Baltimore; William J. Mayo, Rochester, Minn.; John E. Summers, Jr.; Omaha, and Mellish.

On motion of John P. Lord, Omaha, duly seconded and carried, the following papers were read by title: "Indications and Technic of Nephrectomy," Ramon Guiteras, New York; "Contributions to the Therapy of Surgical and Other Diseases with X-Rays," Rudolph Matas, New Orleans; "The Surgical Treatment of Ascites Due to Cirrhosis of the Liver," M. L. Harris, Chicago.

A. J. Ochsner, Chicago, moved that this Section extend its most hearty thanks to Dr. Moore, our President, and Dr. Monroe, our Secretary, for having arranged one of the finest programs that has ever been before any surgical section and for having carried out the conduct of this meeting in a most masterly and successful way. This motion was unanimously carried.

Adjournment.

Section on Hygiene and Sanitary Science.

Tuesday, May 5—Afternoon.

The Chairman, H. M. Bracken, Minneapolis, called the meeting to order at 2 p. m.

Cressy L. Wilbur, Lansing, Mich., read a paper on "Co-operation: Methods of Improving the Usefulness of Statistical Classification of Causes of Death." The paper was discussed by Wilbur; J. S. Fulton, Baltimore; G. T. Swarts, Providence, R. I.

In connection with this subject-matter, Dr. Wilbur introduced resolutions, which he requested to be recommended to the House of Delegates for adoption, calling on the various state medical societies to take steps looking to the adoption of registration laws in states where none presently exist; calling on physicians throughout the United States generally to promote the securing of accurate mortality statistics by giving correct and definite statements of all causes of deaths occurring in their practice. Further, that the American Medical Association appoint a Committee on Vital Statistics, to deal with the question of proper compilation of mortality statistics, and the extension of the registration area, etc. On motion, the resolutions in question were referred to the House of Delegates for action, with the recommendation that they be adopted.

The Secretary then read the paper of W. A. King, Washington, D. C., on "Relation of Physicians to Correct Registration of Vital Statistics." The pape [illegible], Seneca Egbert, Philadelphia; T. A. Williams, [illegible]; *Cressy L. Wilbur*, Lansing, Mich.; J. N. Hur[illegible]; J. S. Fulton, Baltimore.

The Secretary then stated to the members that a smoker would be held to-night, to which they were invited, at the Old Absinthe House, Bienville and Bourbon streets.

The Chair named a Nominating Committee as follows: J. N. Hurty, Chairman; W. C. Chapman and Cressy L. Wilbur.

Wednesday, May 6—Morning.

The meeting was called to order at 9 o'clock.

The Chairman of the Committee on Nominations requested further time in which to report, as he desired to have another conference with his fellow members.

The paper, "Drainage, Sewerage and Water Supply of New Orleans," was read by George G. Earl, New Orleans, and discussed by G. T. Swarts, Providence, R. I.; J. S. Fulton, Baltimore, Md.; Seneca Egbert, *Philadelphia, and Mr. Earl.*

"Present Status of the Filtration of Water" was read by George W. Fuller of New York, and discussed by Swarts; W. C. Chapman, Toledo; E. B. Borland, Pittsburg; Seneca Egbert, Philadelphia; F. J. Mayer, Lafayette, La.; W. G. Owens, Whitecastle, La., and Mr. Fuller.

On motion, duly seconded, the thanks of the Association were extended to Messrs. Earl and Fuller for the preparation and submission of their papers.

Secretary Swarts stated that Isadore Dyer, New Orleans, had extended an invitation to the members of the Section to participate in a boat ride on Saturday, May 9, to the Lepers' Settlement in Iberville parish.

The next business in order being the appointment of an Executive Committee, to act with the Chairman, Dr. Bracken named J. S. Fulton and Seneca Egbert as such members.

F. J. Mayer offered a resolution requesting the House of Delegates to have represented on their next annual program the subject "Medical Jurisprudence." Carried. Thereon, after a lantern slide exhibition by Mr. Earl, the meeting adjourned.

Wednesday, May 6—Afternoon.

The meeting was called to order at 2:30 p. m.

The Chairman of the Nominating Committee, on behalf of his Committee, offered the following nominations: For Chairman, G. T. Swarts, Providence, R. I.; Secretary, J. S. Fulton, Baltimore, Md.; member Executive Committee, Seneca Egbert, Philadelphia; delegate to House of Delegates, H. M. Bracken, Minneapolis. On motion of Dr. Hurty, the vote of the Section was cast as a unit for the election of the officers named.

"Tent Life in the Treatment of Pulmonary Tuberculosis" was read by Dr. R. W. Craig, Phœnix, Ariz. The discussion was by J. F. McConnell, Las Cruces, N. M.; J. N. Hurty, Indianapolis; Jos. L. Watt, New York City, and G. T. Swarts.

The next paper, "Where, Under Our Form of Government, Do Public Health Powers Reside, and How Should They be Exercised?" by W. H. Saunders, Montgomery, Ala., was discussed by H. A. Moody, Mobile, Ala.; R. B. Murray, of the Marine-Hospital Service; H. D. Holton, Brattleboro, Vt.; W. H. Saunders, and, by special courtesy of the Section, J. M. Lindsay, Havana.

H. A. Moody, Mobile, Ala., then read a paper on "The Future of Preventive Medicine."

F. J. Mayer asked permission to read, in connection with Dr. Moody's paper, a paper written by himself on the same subject. It was decided, however, that the paper of Dr. Dyer should be first taken up, and that subsequently that of Dr. Mayer could be read, to be discussed in conjunction with the offering of Dr. Moody.

[illegible] New Orleans, then read a paper on "Leprosy from a [illegible]; and which was thereafter discussed by Sw[illegible], [illegible], [illegible] *French of Hawaii, and Dyer.*

By unanimous consent, the volunteer paper of Dr. Mayer was then read by the author. In connection therewith, Dr. Mayer moved the adoption of a resolution endorsing the principle of public education in the matter of hygiene, and the cause, nature and effect of contagious diseases, advocating the establishment of a school to that end, and the appointment of a committee of five to carry out the idea.

Dr. Holton moved that the resolution in question be referred to the House of Delegates, together with the papers read by Drs. Moody and Mayer on the subject.

Geo. M. Kober, Washington, D. C., suggested, as a substitute, that the two papers named be referred to the Committee on Public Health of the Association, and the House of Delegates requested to endorse the idea conveyed in the resolution, which last motion prevailed by a unanimous vote.

Messrs. George W. Fuller, New York, and George G. Earl, New Orleans, were then elected associate members of the Section.

Thereon, the Section adjourned, to meet in joint session with the Section on Practice of Medicine, in the Washington Artillery Hall, Thursday, May 7.

Section on Ophthalmology.

Tuesday, May 5—Afternoon.

The meeting was called to order by the Chairman, John E. Weeks, New York, at 2:15.

Two members of the Executive Committee being absent, the Chair appointed two gentlemen to serve in their stead during the session. Frank Allport being the member present and George E. de Schweinitz and Harold Gifford the appointed members.

On motion of Edward Jackson, the Section voted that the Executive Committee act as Nominating Committee, as had been done in former years.

Address of the Chairman, John E. Weeks, New York.

The Chair called attention to some of the rules governing the reading of papers and discussions, as follows: All papers must be read in whole or part, unless, the author being present and prepared to read the paper, the Section shall unanimously vote to have it read by title, or unless the author, being present, is prevented from reading his paper because of some disability, when the paper may be read for him. The reading of a paper shall not occupy more than twenty minutes. The member opening the discussion of a paper not to have more than ten minutes and subsequent speakers five. No member shall speak twice on the same subject.

The Chair announced an invitation by Drs. Bruns and de Roaldes to visit the Eye, Ear, Nose and Throat Hospital; hours 9 to 10 a. m.; operating day, Thursday.

The Chair also announced that the Section was invited to attend a reception by Dr. and Mrs. Bruns on Wednesday, 5 to 7 p. m., the invitation including ladies accompanying members.

The question was asked if, under the ruling, the author of a paper would be allowed to close the discussion of his subject, to which the Chair replied that he would.

The Chair requested that members, on rising to discuss a paper, announce their names and places of residence, in order that it might be known at all times who was addressing the Section.

William Campbell Posey, Philadelphia, read a paper on "Vernal Conjunctivitis," which was discussed by John E. Weeks, New York; Henry Dickson Bruns, New Orleans; Henry Gradle, Chicago; Zentmayer, Philadelphia; A. R. Baker, Cleveland; Hiram Woods, Baltimore; Stevenson, Akron, Ohio; Strickler, Cincinnati; Gifford, Omaha; Claiborne, New York; Randolph, Baltimore; Morrow, Canton, Ohio.

Rufin A. Wright, Mobile, Ala., read a paper on "Subtropical Trachoma, with Special Reference to a New Therapeutic Agent," which was discussed by James W. Dunn, Cairo, Ill.; Pfingst, Louisville; Gifford, Omaha; Bulson, Fort Wayne; Harlan, Baltimore, and Ledbetter, Birmingham, Ala.

E. C. Ellett, Memphis, Tenn., read a paper on "Experimental Study on Some Methods of Combating Post-Operative Infection of the Anterior Segment of the Globe." Discussed by E. A. Shumway, Philadelphia; Frank Allport, Chicago; de Schweinitz, Philadelphia; Claiborne, New York, and Hale, Chicago.

Louis Stricker, Cincinnati, read a paper on "Ocular Complications of Bright's Disease."

George F. Suker, Chicago, read a paper on "Albuminuric Retinitis and the Decapsulation of the Kidney."

These were discussed jointly by H. D. Bruns, New Orleans; Greenwood, Boston; Connor, Detroit; Jackson, Denver; de Schweinitz, Philadelphia; Griffin, Ann Arbor.

Wednesday, May 6—Morning.

The meeting was called to order at 9:15 a. m. by the Chairman.

George E. de Schweinitz, Philadelphia, read a paper on "The Physiology of the Sympathetic in Relation to the Eye."

William H. Wilder, Chicago, read a paper on "The Influence of Resection of the Superior Ganglion of the Cervical Sympathetic in Glaucoma."

James Moore Ball, St. Louis, read a paper on "Influence of Resection of the Cervical Sympathetic in Optic Nerve Atrophy, Hydrophthalmos and Exophthalmic Goiter."

John E. Weeks, New York, read a paper on "Pathology of the Cervical Sympathetic."

Discussion on Symposium by G. Melville Black, Denver; G. C. Savage, Nashville, Tenn; George F. Suker, Chicago; Edward Jackson, Denver; George E. de Schweinitz, Philadelphia.

Henry Gradle, Chicago, read a paper on "Retinal Disease Limited to the Region of the Macula Lutea." Discussed by W. L. Dayton, Lincoln, Neb.; Leartus Connor, Detroit; C. W. Hawley, Chicago.

Casey A. Wood, Chicago, chairman of the Committee on the Pathologic Exhibit, delivered an address on "Methods of Preparing and Preserving Ophthalmic Specimens for the Museum."

Edward Jackson, Denver, read a paper on "Skiascopy as a Method of Precision." Discussed by O. A. Griffin, Ann Arbor; Harold Gifford, Omaha; William H. Wilder, Chicago; C. W. Hawley, Chicago.

Wednesday, May 6—Afternoon.

The meeting was called to order at 2:10 p. m. by the Chairman.

"Some Points in the Pathology of Neoplasms of the Conjunctiva, Illustrated by the Present Exhibit of Morbid Growths." Edward A. Shumway, Philadelphia.

Casey A. Wood, Chicago, gave a stereopticon exhibit of the fundi of various lower animals. Subject, "A Stereopticon Demonstration of Dr. Lindsay Johnson's Method of Classifying the Mammalia by the Appearances of the Fundus Oculi."

Robert L. Randolph, Baltimore, chairman of the Committee on Bacteriologic Exhibit, delivered an address on "The Bacteria Concerned in the Production of Eye Inflammations," and exhibited a number of illustrative lantern pictures.

"Bacteria in the Conjunctiva, Cornea, Iris, Ciliary Body and Chorioid, and Changes Caused Thereby," was illustrated with stereopticon slides by Brown Pusey, Chicago.

"The Essentials and Unessentials of Ophthalmic Asepsis." Harold Gifford, Omaha. Discussed by Casey A. Wood, Chicago; I. J. Dunn, Erie; W. H. Dudley, Easton, Pa.; A. O. Pfingst, Louisville; A. R. Baker, Cleveland; E. C. Ellett, Memphis; W. R. Parker, Detroit; J. H. Claiborne, New York, and Harold Gifford, Omaha.

"Development of the Fusion Center in the Treatment of Strabismus." Nelson M. Black, Milwaukee, Wis.

"A Set of Charts for Stereoscope to Be Used for an Ambylopic Eye or for Treatment of Squint." Albert B. Hale, Chicago.

Discussion on these two papers by G. C. Savage, Nashville, Tenn.; Casey A. Wood, Chicago; Edw. Jackson, Denver; M. D. Stevenson, Akron, Ohio.

The Secretary read a communication pertaining to a united meeting of various ophthalmologic and otologic societies, from the Secretary of the Academy of Ophthalmology and Oto-Laryngology, which was referred to the Executive Committee.

"Cramp of the Ciliary Muscle Due to Eyestrain." J. W. Wright, Columbus, Ohio. Discussed by Edw. Jackson, Denver; John A. Donovan, Butte, Mont.; Lawrence R. Ryan, Galesburg, Ill.

Thursday, May 7—Morning.

The meeting was called to order at 9:15 a. m. by the Chairman.

"Some Observations on the Eye Complications of Smallpox During the Recent Epidemic in Cleveland." A. R. Baker, Cleveland, Ohio. Discussed by J. F. Fulton, St. Paul; Leartus Connor, Detroit; Mann, Texarkana; Jno. A. Donovan, Butte, Mont.; R. W. Miller, Los Angeles; Oscar Dodd, Chicago; E. P. Morrow, Canton, Ohio; D. A. Thompson, Indianapolis; Greenwood, Boston; F. W. Hilscher, Spokane; Jno. E. Weeks, New York.

"Skin Grafting on the Eyelids." Oscar Dodd, Chicago.

"Entropion and the Operations Employed for Its Relief." Jno. O. McReynolds, Dallas, Tex. Dr. McReynolds requested from the Chair the privilege of making a few remarks as an addendum to his paper of last year on the pterygium operation, which was granted.

The above two papers were discussed by Albert B. Hale, Chicago; Wm. H. Wilder, Chicago; C. W. Hawley, Chicago; Frank C. Todd, Minneapolis; R. W. Miller, Los Angeles; Oscar Dodd, Chicago.

"Traumatic Lesions of the Ocular Adnexa, with Report of a Case of Contused Wound of the Eyebrow Resulting in Complete Monocular Blindness Unaccompanied by Ophthalmoscopic Changes." Eliet O. Sisson, Keokuk, Iowa. *Discussed by* Casey A. Wood, Chicago; Wm. Campbell Posey, Philadelphia; Harold Gifford, Chicago; Jno. O. McReynolds, Dallas; Oscar Dodd, Chicago; Greenwood, Los Angeles; Edw. Jackson, Denver; A. E. Bulson, Ft. Wayne, Ind.; Leartus Connor, Detroit; Zentmayer, Philadelphia; S. L. Ledbetter, Birmingham, Ala.; John E. Weeks, New York.

"Report of a Case of Complete Absence of Both Eyeballs at Birth." Lawrence R. Ryan, Galesburg, Ill. *Discussed by* Casey A. Wood, Chicago; James Moores Ball, St. Louis; J. H. Claiborne, Jr., New York; S. C. Ayers, Cincinnati.

EXHIBITION OF INSTRUMENTS.

Wm. C. Posey, Philadelphia, exhibited an apparatus for convenience in carrying bottles of collyria.

W. F. Suker, Chicago, exhibited an instrument to be used in connection with the Geneva ophthalmoscope, to facilitate the demonstration of the eye fundus to students.

Frank C. Todd, Minneapolis, exhibited a tendon tucker, which was an improvement on the one presented by himself last year.

Frank Allport, Chicago, introduced a resolution that

Whereas, *The eyesight and hearing of school children is of inestimable value to them for the acquiring of an education; therefore, be it*

Resolved, That it is advised by the American Medical Association that measures be taken by the various school authorities and boards of education, boards of health, and if possible state legislators, to secure examinations of the eyes and ears of all school children in this country with a view to the suitable treatment for the relief of the ophthalmologic and otologic imperfections.

On motions of G. C. Savage, Nashville, Tenn., and amended by Edw. Jackson, Denver, these resolutions were endorsed by the Section and recommended to the House of Delegates of the American Medical Association.

Thursday, May 7—Afternoon.

The meeting was called to order by the Chairman at 2:15 p. m.

The report of the Nominating Committee was: Chairman, R. L. Randolph, Baltimore; secretary, A. E. Bulson, Ft. Wayne, Ind.; delegate, Casey A. Wood, Chicago. A motion by Dr. Savage to adopt the report in full was carried. The Section voted that the Secretary cast the ballot for the nominees and they were declared elected.

Dr. de Schweinitz, for the Executive Committee, recommended to the Section the adoption of the following rule: Any member of the Section on Ophthalmology of the Association who has twice permitted his name to be listed on the program of the Section as intending to read a paper and has failed to attend the sessions at which these papers were due, and to give satisfactory explanation of his absence, shall be no longer eligible to read a paper before this Section until he has attended at least two consecutive sessions. On motion of Dr. Baker the recommendation was adopted as a rule of the Section.

On motion of Dr. Moulton a vote of thanks was extended the gentlemen who had so kindly allowed the use of the stereopticon. On motion of the Secretary the Section gave a vote of thanks to Dr. Bruns for his assistance and to Dr. and Mrs. Bruns for their courtesy and hospitality to the Section.

"Extraction of the Crystalline Lens in High Myopia." H. V. Würdemann and Nelson M. Black, Milwaukee.

"The Management of High Myopia." J. H. Claiborne, New York.

These two papers were discussed by Edw. Jackson, Denver; Albert B. Hale, Chicago; H. D. Bruns, New Orleans; G. M. Black, Denver; J. F. Fulton, St. Paul; Moulton, Ft. Smith, Ark.; Oscar Dodd, Chicago; de Schweinitz, Philadelphia; Leartus Connor, Detroit; Greenwood, New Orleans; Jno. E. Weeks, New York.

"Calcareous Degeneration of Corneal Cicatrices." H. Moulton, Ft. Smith, Ark.

"The Voluntary and Involuntary Brain Centers Controlling the Ocular Muscles." G. C. Savage, Nashville, Tenn. Discussed by Edw. Jackson, Denver.

Under the head of miscellaneous business the Chairman explained the reasons why Prof. Uhthoff failed to be present as a guest of the Section.

On motion of the Secretary a vote of thanks was extended to the Pathologic Committee who prepared the exhibit.

On motion of the Secretary a vote of thanks was extended to the Committe who prepared the Bacteriologic Exhibit.

Leartus Connor, Detroit, offered a resolution, that a committee of five, consisting of the last five ex-chairmen of this Section, be requested to make a study of the situation of the relation of this Section to the ophthalmologists of the United States, to the end that they may determine in what way a larger number can be brought into co-operation with this Section. An amendment was offered by Dr. Savage, that Dr. Connor be included in the committee. The amended motion was adopted.

At the suggestion of Dr. Edw. Jackson, Denver, the Section gave a vote of thanks to the officers of this Section.

Section on Diseases of Children.

Tuesday, May 5—Afternoon.

Called to order at 2:35 p. m. Attendance 100.

The Chairman, John C. Cook, Chicago, delivered his address on "Development and Care of Children," and presented to the members the bibliography of the same in printed form.

In the absence of two members of the Executive Committee the Chairman appointed to act *pro tem.*: Drs. A. C. Cotton, Chicago, and H. E. Tuley, Louisville, Ky.

It was moved and carried that a suggestion of the Chairman in his address that each state should have a committee of five persons to have control of matters of education and child labor and that these should be appointed by judges of the Supreme Court, so as to remove these matters forever from the domain of petty politics, be referred to the House of Delegates for action.

The Secretary read Sections 6 and 7 of the By-laws.

Paper 2. "Anatomic and Physiologic Correspondences of Child and Adult." Wm. T. Eckley, Chicago.

Paper 3. "Is the Study of Pediatrics Worth the Attention It Gets, and Does It Get the Attention It Deserves?" C. F. Wahrer, Fort Madison, Iowa. Discussed by W. F. Boggess, Louisville, Ky.

Paper 5. "Acute Suppurative Cervical Adenitis of Infancy. Thomas S. Southworth, New York. Discussed by A. C. Cotton, Chicago; C. G. Kerley, New York; R. B. Gilbert, Louisville; Brown, Decatur, Ill.; E. T. Shelly, Atchison, Kan.; Wm. T. Eckley, Chicago; Wm. C. Williams, Chicago; J. C. Mastin, Chicago; H. A. Leavell, Louisville, Ky., and T. S. Southworth.

H. M. McClanahan moved that, in view of the death of Dr. Margaret Taylor Shutt of Springfield, Ill., since the last annual session, a committee be appointed by the Chairman to draw up suitable resolutions and transmit them to her family. Carried.

The Section then adjourned.

Wednesday, May 6—Morning.

Called to order at 9:09 a. m. Attendance 175.

Paper 6. "The Pathology of Summer Diarrheas of Children," by G. W. Boot, Evanston, Ill., was, in Dr. Boot's absence, read by the Secretary.

On motion of Dr. C. G. Kerley of New York the discussion on the symposium was postponed until the other papers had been read.

Paper 7. "Every-Day Problems in Infant Feeding." Henry Enos Tuley, Louisville, Ky.

Paper 8. "Infant Feeding." Alexander McAlister, Camden, N. J.

Paper 9. "The Infant Digestive Disturbances." Alfred C. Cotton, Chicago.

Paper 10. "Suggestions for Reducing the Prevalency of Summer Diarrhea." J. Ross Snyder, Birmingham, Ala.

Paper 11. "Observations on Breast Feeding from an Obstetrician's Point of View, with Report of Cases." Effa V. Davis, Chicago.

Paper 12. "Aphthæ and Herpes Contracted by Children Drinking Milk from Cows Suffering from Foot and Mouth Diseases." E. F. Brush, Mt. Vernon, N. Y.

Paper 15. "Observations on Prolonged Withdrawal of all Foods in the Management of Certain Cases of Intestinal Disorders." Thomas D. Parke, Birmingham, Ala.

Discussion on symposium (Papers 6 to 15) by H. M. McClanahan, Omaha; C. G. Kerley, New York; R. B. Gilbert, Louisville, Ky.; Dixon, Kentucky; Auld, Chicago; Parkhurst, Indiana; T. S. Southworth, New York.

The discussion was then voted to be continued at the afternoon meeting.

The Section adjourned.

Wednesday, May 6—Afternoon.

Called to order at 2:40 p. m. Attendance 100.

Paper 14. "Infant Feeding: Its Relation to Diarrheal Diseases of Infancy." James G. Mastin, Chicago.

Discussion continued on symposium by George N. Acker, Washington, D. C.; Southworth, New York (for Dr. G. W. Boot); Henry E. Tuley, Louisville, Ky.; A. C. Cotton, Chicago; J. Ross Snyder, Birmingham, Ala.; Effa V. Davis, Chicago; James G. Mastin, Chicago; Thomas D. Parke, Birmingham, Ala.

H. E. Tuley, Louisville, then moved that a committee be appointed by the Chairman to draw up a classification of the intestinal diseases of children, to be submitted to the Section in 1904. Carried.

Paper 18. "Case of Probable Gummata of the Liver in a Child of Six." Maurice Ostheimer, Philadelphia. Discussion by R. B. Gilbert, Louisville, Ky., and C. F. Wahrer, Fort Madison, Iowa.

Paper 34. "Influenza in Children." Wm. Carver Williams, Chicago. Discussion by R. B. Gilbert, Louisville, Ky.; C. G. Kerley, New York; Parkhurst, Indiana; H. M. McClanahan, Omaha; Theo. J. Carlin, Minnesota; John C. Cook, Chicago; C. F. Wahrer, Fort Madison, Iowa; J. H. Hanna, Covington, Tenn., and Wm. Carver Williams, Chicago.

The Section adjourned.

Thursday, May 7—Morning.

Called to order at 9:15 a. m. Attendance 125.

Chairman announced as committee to submit a classification of the intestinal diseases of childhood to Section in 1904: Henry Enos Tuley, Louisville, Ky.; Alfred C. Cotton, Chicago; Thomas S. Southworth, New York.

Paper 19. "Capillary Bronchitis." Philip F. Barbour, Louisville, Ky.

On motion of Dr. Kerley, discussion on the pulmonary papers was postponed until the others had been read.

Paper 21. "Management of Catarrhal Pneumonia in Infants and Young Children." Charles Gilmore Kerley, New York.

Discussion on Papers 19 and 21 by C. F. Wahrer, Fort Madison, Iowa; Wm. C. Williams, Chicago; R. B. Gilbert and H. E. Tuley, Louisville, Ky.; Thos. D. Parke, Birmingham, Ala.; H. A. Leavell and P. F. Barbour, Louisville, Ky.; C. G. Kerley, New York.

Paper 31. "The Safranin Reaction in the Urine of Children," by Dr. W. S. Christopher of Chicago, was read by Dr. A. C. Croftan, Chicago. Discussion by A. C. Croftan, Chicago, and W. F. Boggess, Louisville.

P. F. Barbour, Louisville, moved that the unanimous thanks the Section be tendered to the Chairman for the complete bibli raphy of his paper which he had presented in printed form the members. Carried.

The Section then adjourned.

Thursday, May 7—Afternoon.

Called to order at 2:40 p. m. Attendance 100.

The Nominating Committee put in nomination for 1904: Ch man, Charles G. Kerley, New York; Secretary, C. F. Wahrer, F Madison, Iowa. These were unanimously elected.

J. R. Snyder nominated Henry E. Tuley, Louisville, as the D gate of the Section, in the House of Delegates for two years, a the Secretary was empowered to cast one ballot for Dr. Tuley.

The Chairman then presented to Dr. Kerley a gavel to be us in Section work, to which Dr. Kerley fittingly replied.

Paper 26. "The Treatment of Scarlet Fever: Its Complicati and Sequelæ." H. M. McClanahan, Omaha. Discussion by R. Gilbert, Louisville, Ky.; G. A. Hermann, Hamilton, Ohio; J. Hanna, Covington, Tenn.; B. R. Shurly, Detroit; E. T. Shel Atchison, Kan.; Dodson, Chicago; Pearson, Kansas; Kenne Kentucky, and H. M. McClanahan.

Paper 30. "Prolonged or Retained Intubation Tubes with Method of Treatment Leading to Their Extraction." B. R. Shur Detroit. Discussion by C. G. Kerley, New York, and Brow Illinois.

Paper 28. "Hydronephrosis in a Boy of Three and One-h Years, with Operation and Recovery," by Samuel W. Kelley, Cle land, Ohio, was then read by the Secretary.

The Section, having completed its work, then adjourned to t next annual session.

Section on Stomatology.

Tuesday, May 5—Afternoon.

The Section was called to order by the Chairman, M. L. Rhe of New York.

It was moved that the papers presented by those unavoidably a sent should be read. Carried.

W. E. Walker, New Orleans, and M. H. Fletcher, Cincinnati, we appointed on the Executive Committee

The address of the Chairman, M. L. Rhein, was read and w discussed by Frederichs, Eames, Boston; Gilmer, Chicago; T. Constant, Scarborough, Eng.; W. E. Walker, C. V. Vignes, Ne Orleans; Talbot, Chicago, and Rhein.

Drs. Eames, Walker and Talbot were appointed a committee t consider the subject of the Chairman's address and to form resol tions thereon.

It was resolved that the following gentlemen of other countrie be elected members of this Section of the American Medical Ass ciation by invitation: A. C. Spaulding, Paris; T. E. Constant Scarborough, Eng.; D. E. Causch, Brighton, Eng.; Michael Mor ganstein, Strassburg, Germany; Oskär Römer, Strassburg, Ger many.

It was resolved that the following local residents be made asso ciate members of the Section on Stomatology of the America Medical Association: C. Edmund Kelk, Jr., Paul de Verges, Jule J. Sarrazin, H. E. Belden.

A paper entitled "The Vasomotor System" was read by Eugen S. Talbot and illustrated by slides. Discussed by Fletcher, Constant, Gilmer, Eames, Belden, Sarrazin and Talbot.

Exhibition of Slides in demonstration of a paper entitled "Th Development of Hard Tissue in the Pulp," by D. E. Causch o Brighton, Eng.

A paper by Martha Anderson, Moline, Ill., entitled "Notes on Pulp Technic," was read by E. S. Talbot.

Exhibition of Slides in demonstration of a paper entitled "Tolerance of Tissues for Foreign Bodies, with Special Reference to the Pulp and Peridental Membrane," by M. H. Fletcher, Cincinnati.

Exhibition of Slides in demonstration of a paper entitled "Some Histologic Facts Contradictory to the Theory of Odontoblasts," by Michael Morganstein, Strassburg, Germany.

The following were appointed a Nominating Committee: A. E Baldwin, Chicago; M. H. Fletcher, Cincinnati; W. E. Walker, New Orleans.

Wednesday, May 6—Afternoon.

The Section was called to order at 2:25 by A. E. Baldwin, Chicago, in the Chair.

M. H. Fletcher of Cincinnati read a paper entitled "Tolerance of Tissues for Foreign Bodies, with Special Reference to the Pulp and Peridental Membrane." The paper was discussed by Talbot, Baldwin, Curtis, Rhein, H. Pilcher of Vienna, Eames, Walker and Fletcher.

It was resolved that all papers on the pulp be read and discussed jointly.

A paper entitled "The Dental Pulp Viewed without the Microscope" was read by T. E. Constant, Scarborough, Eng.

A paper entitled "Some Histologic Facts Contradictory to the Theory of Odontoblasts," by Dr. Michael Morganstein, Strassburg, Germany, was read by A. E. Baldwin.

"The Development of Hard Tissue in the Pulp of Human Teeth," by D. E. Causch, Brighton, Eng., was read by G. F. Eames.

A paper on "Pulp Hypertrophy of the Teeth," by Oskär Römer, Strassburg, Germany, was read by M. L. Rhein.

These papers were discussed by Talbot and Fletcher. At this point the discussion was postponed until the next meeting.

A. E. Baldwin made the report from the House of Delegates.

Thursday, May 7—Morning.

The meeting was called to order at 10:15 by the Chairman, M. L. Rhein.

The adjourned discussion of the paper of T. E. Constant was continued by Fletcher, Pilcher, Baldwin, Walker, Eames, Rhein and Constant.

Dr. Baldwin made a supplemental report from the House of Delegates to the effect that any dentist holding the degree of D.D.S. from any reputable dental college, and being a member of his local dental and state society shall, on recommendation of the officers of the Section and vote of the Section, become a dental member of the American Medical Association; and shall enjoy all the privileges of regular members.

The Nominating Committee made the following report, and the Secretary was authorized to cast the ballot for its adoption: G. F. Eames, chairman; Eugene S. Talbot, secretary; executive committee: A. H. Peck, R. R. Andrews and M. L. Rhein. Member to the House of Delegates, Dr. A. E. Baldwin.

A. E. Baldwin read a paper on "Professional Responsibilities." Discussed by T. E. Constant of England, Gilmer, Talbot, Curtis, Rhein, Pilcher, Walker, Eames and Baldwin.

A paper by O. N. Heise, Cincinnati, entitled "Empyema of the Maxillary Sinus," was read by G. F. Eames, and discussed by Gilmer, Fletcher, Constant, Rhein, Baldwin and Curtis.

Thursday, May 7—Afternoon.

The meeting was called to order at 2:10 p. m. by M. H. Fletcher in the Chair.

G. F. Eames read a paper on "The Influence of Local and General Disturbances on the Oral Secretions." Discussed by Talbot, Fletcher, Walker, Pilcher and Eames.

A paper by Charles Chittenden, Madison, on "Is the Accomplishment of Reasonable Ideals in Dental Education Near at Hand?" was read by W. E. Walker, New Orleans, and discussed by Talbot, Fletcher, Rhein, Constant, and Walker.

W. E. Walker read a paper entitled "Orthodontic Facial Orthopedia." Discussed by Talbot, Constant, Fletcher, Belden, Rhein and Walker.

H. E. Belden, New Orleans, read a paper entitled "Methods of Controlling Hemorrhage of the Oral Cavity." Discussed by Rhein, Eames and Belden.

On motion the paper of Richard Gray, Baltimore, on "The Dentist in the U. S. Army, and of Alice M. Steves, Boston, entitled "Medical and Dental Libraries," were read by title.

G. F. Eames, Chairman of the Committee to consider the suggestions of the Chairman's Address, reported and the report was adopted, as follows:

Your committee have carefully considered the propositions contained in the Chairman's Address, relating to the training of women as dental nurses, that they may, under the prescription and personal direction of the stomatologist, cleanse and sterilize the mouth, polish the teeth, make medical applications to the gums, and otherwise assist the practitioner in his treatment of patients.

Your committee heartily approves the above named suggestions and earnestly commends the matter for the approval of this Section of the American Medical Association, hoping that it will lead to such action being taken by different state dental societies looking to the amendment of our dental laws, so that the appointment and employment of "dental nurses" shall be legalized.

Section on Nervous and Mental Diseases.

Tuesday, May 5—Afternoon.

The meeting was called to order at 2 p. m. by F. W. Langdon, Cincinnati, Chairman.

The Chairman said: It affords me great pleasure to say to you that, owing to the industry and efficiency of our worthy Secretary, we have to present to you at this meeting a most attractive and somewhat extensive program, which, providing we digest and assimilate it properly, can not fail to be of benefit to us and to mankind through us. I am also admonished that the length of the program and the limited time at our disposal requires that we waste no time in preliminaries, and I therefore pronounce the session of the Section on Nervous and Mental Diseases open. As Chairman, one of my privileges is to have the right of way, and, in order that I may not take up too much of your valuable time, I shall present a mere abstract of my address.

Sir William Gowers and Sir Victor Horsley, both of London, have been requested by me to become members of our Section by invitation. Both have accepted, but are unable to be present.

I wish to announce that the annual banquet of the Section will be held to-night at Victor's Restaurant, on Bourbon street, at 8 o'clock.

Address of Chairman. F. W. Langdon, Cincinnati.

H. T. Patrick, Chicago: I move that the thanks of the Section be extended to the Chairman for his address, and that it be referred to the Executive Committee. Carried.

"Trend of Modern Psychiatry and Its Relation to General Medicine." John Punton, Kansas City, Mo. Discussed by F. Savary Pearce, Philadelphia; Daniel Brower, Chicago; R. H. Cook, Oxford, Ohio; McBride, Pasadena, Cal.; Dewey, Wauwatosa, Wis.; A. E. Sterne, Indianapolis; W. J. Herdman, Ann Arbor, Mich.; G. W. McCaskey, Fort Wayne, Ind., and Punton.

The Chairman named the following to serve as a Nominating Committee: H. T. Patrick, John Punton and W. Sinkler.

Dr. Patrick: As there is nothing to do to-morrow morning, and we have a very extensive program, I move that we have a morning session at 10 o'clock. Carried.

"A Contribution to the Study of Visual Disturbances in Brain Injury." William E. Gamble, Chicago. Discussed by H. T. Pershing, Denver; H. T. Patrick, Chicago; McBride, Los Angeles, Cal.; W. T. Eckley, Chicago, and Gamble.

"Epilepsy; a Clinical Study." J. G. Biller, Cherokee, Iowa.

"Pathology of Inebriety." T. D. Crothers, Hartford, Conn. Discussed by Petty, Memphis, Tenn.; A. E. Sterne, Indianapolis, and Crothers.

Wednesday, May 6—Morning.

The meeting was called to order at 10 a. m.

The minutes of the last meeting were read and approved.

The Secretary read a letter from the Chairman of the Section on Ophthalmology, stating that 2 o'clock, at the College of Pharmacy, Casey Wood would give a stereopticon demonstration of Dr. Lindsay Johnson's method of classifying the mammalia by the appearance of the fundus oculi. All members of the Association were cordially invited.

"Ambulatory Automatism." Hugh T. Patrick, Chicago. Discussed by Brainard, Los Angeles; Albert E. Sterne, Indianapolis; John Punton, Kansas City; Wharton Sinkler, Philadelphia; P. E. Archinard, New Orleans; W. J. Herdman, Ann Arbor, Mich.; F. W. Langdon, Cincinnati; C. C. Hersman, Pittsburg; F. Savary Pearce, Philadelphia; D. I. Wolfstein, Cincinnati, and Patrick.

Wednesday, May 6—Afternoon.

"Penetrating Wound of Both Cerebral Hemispheres, with Recovery." W. S. Lindsay, Topeka, Kan. Discussed by H. T. Pershing, Denver; F. Savary, Pearce, Philadelphia; Brainard, Los Angeles; Albert E. Sterne, Indianapolis, and Lindsay.

The Nominating Committee recommended the following names for election: Chairman, F. Savary Pearce, Philadelphia; secretary, David I. Wolfstein, Cincinnati; member of the House of Delegates, F. W. Langdon, Cincinnati. It was moved and seconded that the report of the Nominating Committee be adopted. Carried.

"Relation of Epilepsy to Chronic Gastro-Intestinal Diseases." G. W. McCaskey, Fort Wayne, Ind.

"Neurasthenia and Its Treatment by Actinic Rays." Albert E. Sterne, Indianapolis. Discussed by F. Savary Pearce, Philadelphia; David I. Wolfstein, Cincinnati; John Punton, Kansas City; W. J. Herdman, Ann Arbor, Mich.; C. C. Hersman, Pittsburg; F. W. Langdon, Cincinnati, and A. E. Sterne.

SYMPOSIUM ON RELATION OF PUBLIC SCHOOL METHODS TO PSYCHOSES.

"Relation of the Public School to the Seminary and College as to Psychoses." F. Savary Pearce, Philadelphia.

"Best Methods of Counteracting Psychoses Due to Strain and Stress." William J. Herdman, Ann Arbor, Mich.

The two papers were discussed by Harold N. Moyer, Chicago; John Punton, Kansas City; J. H. McBride, Los Angeles; R. C. Moore, Omaha; T. A. Williams, East Bernard, Texas; A. E. Sterne, Indianapolis, and Daniel W. Brower, Chicago.

Thursday, May 7—Morning.

Called to order at 10 o'clock.

Continuation of the discussion on the relation of public school methods to psychoses, by D. O. Wilkinson, Montibello, Ala.; Wharton Sinkler, Philadelphia; D. I. Wolfstein, Cincinnati; A. J. Pressey, Cleveland; C. C. Hersman, Pittsburg; Shelley, Atchinson, Kan.; T. A. Williams, East Bernard, Texas; C. C. Hersman, Pittsburg; J. H. McBride, Pasadena, Cal.; H. T. Patrick, Chicago; W. S. Lindsay, Topeka, Kan.; F. W. Langdon, Cincinnati; Albert E. Sterne, Indianapolis; F. Savary Pearce, Philadelphia, and William J. Herdman, Ann Arbor, Mich.

William J. Herdman, Ann Arbor, Mich., presented the following resolution:

Resolved, That we, the members of the Section on Nervous and Mental Diseases of the American Medican Association, are deeply conscious of the vital importance of the methods of education and school environment on the development of youth and are of the opinion that the time has arrived for the harmonious and helpful co-operation of educators and physicians in the work of education. In view of this belief on our part, be it further

Resolved, That we appoint a committee from our membership at this meeting, whose duty it shall be:

First. To collect, during the coming year, such exact information as may be accumulated, both in this country and in Europe, on the school methods in their relation to the physical and mental welfare of youth.

Second. To confer with leading educators everywhere with the view of eliciting information and opinions on the subject and of securing co-operation in efforts for improvement of methods.

Third. To report to the Section at its next annual session the results of their investigations, and formulate a plan for future and vigorous prosecution of such reforms as we may decide from their report are clearly needed.

In accordance with the above resolution, which was adopted, the Chairman named the following committee: William J. Herdman, Ann Arbor, Mich., chairman; T. A. Williams, East Bernard, Texas; J. H. McBride, Los Angeles, Cal.; F. Savary Pearce, Philadelphia, and H. T. Patrick, Chicago.

John Punton inquired whether it would be possible to get the papers which were read before the Section on Nervous and Mental Diseases and the discussion thereon in book form, without waiting for the appearance of the transactions in The Journal of the American Medical Association.

The Chairman appointed Dr. Punton a committee of one to inquire into the matter and report at the afternoon meeting. (Report was in the negative.)

"Atrophy of Hand Muscles, with Localized Sensory Disturbances; *Possible Early Syringomyelia.*" D. I. Wolfstein, Cincinnati. Discussed by H. T. Patrick, Chicago; Wharton Sinkler, Philadelphia; A. E. Sterne, Indianapolis; F. W. Langdon, Cincinnati, and D. I. Wolfstein, Cincinnati.

Thursday, May 7—Afternoon.

F. Savary Pearce reported that the committee which had been appointed in the morning to consider the relation of public school methods to psychoses had already held one meeting, and they hoped to make considerable progress before the next annual session of the Section.

"Ten Cases of Chronic Morphinism and Results of Treatment." A. J. Pressey, Cleveland, Ohio. Discussed by George E. Petty, Memphis, Tenn., and A. J. Pressey.

"The Nervous Phenomena Associated with Movable Kidney." Wharton Sinkler, Philadelphia. Discussed by A. P. Ohlmacher, Gallipolis, Ohio; R. C. Moore, Omaha; J. L. Miller, Chicago; A. R. Elliot, Chicago; A. C. Croftan, Chicago, and F. Savary Pearce, Philadelphia.

"A Consideration of the Neuroses of the Status Lympaticus." A. P. Ohlmacher, Gallipolis, Ohio. Discussed by D. I. Wolfstein, Cincinnati; A. P. Ohlmacher; H. T. Pershing, Denver; H. T. Patrick, Chicago; D. I. Wolfstein, and A. P. Ohlmacher.

"Carcinoma of Spine and Meninges Secondary to Cancer of the Breast." F. Savary Pearce, Philadelphia. Discussed by H. T. Pershing, Denver, and F. Savary Pearce.

"Some Toxemias in Relation to the Production of Nervous and Mental Diseases." Samuel Bell, Detroit.

"Treatment of Emotional Disturbances." Howell T. Pershing, Denver. Discussed by H. T. Patrick, Chicago; John Punton, Kansas City; B. F. Turner, Memphis, Tenn.; F. Savary Pearce, Philadelphia, and H. T. Pershing.

The Chairman: I am pleased to announce that this completes the work of the Section on Nervous and Mental Diseases. We have listened to an excellent program, and have been able to complete it in three days by holding two daily sessions instead of one.

R. C. Moore, Omaha: I move that the thanks of the members of the Section be extended to the Chairman and Secretary for the admirable way in which they have conducted the proceedings. Unanimously carried.

Section on Cutaneous Medicine and Surgery.

TUESDAY, MAY 5—AFTERNOON.

The Section was called to order at 2 p. m. by the Chairman, John A. Fordyce, who gave an address on "The Modern Conception of Eczema." It was discussed by Zeisler, Illinois; Bulkley, New York; Ohmann Dumesnil, Missouri.

H. R. Varney, Detroit, read a paper on "Results in Radiotherapeutics and Clinical Conclusions." Discussed by Skinner, Connecticut; Zeisler, Illinois; Bulkley, New York; Hubbard, Tennessee; Campbell, Illinois; Edwards, Tennessee: Ohmann Dumesnil, Missouri; Duncan, Missouri; Guthrie, New York; Roussel, Louisiana; Varney, Michigan.

The paper of Louis E. Schmidt, Chicago, entitled "Clinical Results Obtained in the Use of Finsen's and Other Lights," was read by title.

M. L. Heidingsfeld, Cincinnati, read a paper entitled "Treatment of Syphilis by Injection." Discussed by Ohmann Dumesnil, Missouri; Kessler, Iowa; Anthony, Illinois: Schamberg, Pennsylvania; Zeisler, Illinois; Weiss, New York; Heidingsfeld, Ohio.

H. G. Anthony, Chicago, read a paper entitled "Fibroma Molluscum." Discussed by Heidingsfeld, Ohio; Bulkley and Fordyce, New York; Anthony, Illinois.

The next order of business being the appointment of a Nominating Committee, it was moved and carried that the Chair appoint a committee of three, to report to-morrow. The Chair appointed Baum, Illinois; Vanderhook, Minnesota; Schamberg, Pennsylvania.

The Section adjourned to 2 p. m., Wednesday.

WEDNESDAY, MAY 6—AFTERNOON.

The Nominating Committee reported for chairman, Henry G. Anthony, Chicago; secretary, R. R. Campbell, Chicago; member of House of Delegates, Jay F. Schamberg, Philadelphia; alternate, G. W. Wende, Buffalo.

Paper, "Treatment of Leprosy," by A. H. Ohmann Dumesnil, St. Louis. Discussed by J. F. Schamberg, Pennsylvania; Duncan; Vanderhook; Roussell, Louisiana; J. A. Fordyce, New York, and Ohmann Dumesnil.

Papers of William S. Gottheil, entitled "Tuberculosis Cutis Frambesioides Disseminata," and Eugene Carson Hay, Hot Springs, Ark., on "Syphilitic Fever," and Henry Stelwagon, Philadelphia, on "Larva-Migrans," were read by title.

Paper, Joseph Zeisler, Chicago, "Notes on the Treatment of Lichen Planus." Discussed by Baum, Illinois; Schamberg, Pennsylvania; Dumesnil, Missouri; Heidingsfeld, Ohio; Duncan; Shelmire, Texas, and Zeisler.

It was voted not to accept the paper of Justin de Lisle.

Paper, "Papilloma of the Sole," by Douglas W. Montgomery, was read by title.

Paper, "Some Clinical Observations on Chicken-pox," by Jay F. Schamberg, Philadelphia. Discussion by Kessler; Baum, Illinois; Dumesnil, Missouri, and Shelmire, Texas.

Paper, "Diagnosis of Cutaneous Syphilis," by Isadore Dyer, New Orleans. Discussion by Anthony, Illinois; Heidingsfeld, Ohio, and Dyer, Louisiana.

Paper, "Report of a Case of Pemphigus Chronicus," by William Frick, Kansas City. No discussion.

Paper, "Notes on an Interesting Case of Lupus Vulgaris," by R. R. Campbell, Chicago. Discussion by Zeisler, Chicago; Anthony, Chicago; Duncan and Campbell.

THURSDAY, MAY 7—MORNING.

The clinic by Isadore Dyer at Charity Hospital was well attended. A number of most interesting cases were presented, the discussions on which were most valuable as well as highly instructive.

THURSDAY, MAY 7—AFTERNOON.

Paper, "Atrophia Cutis Idiopathica," by William S. Gottheil, New York, was read by title.

Paper, "Diagnosis of Smallpox," by A. W. Brayton, Indianapolis, was read in abstract. No discussion.

Paper, "Pathology and Treatment of Smallpox," by N. D. Brayton, Indianapolis, was read by title.

Paper, "Pityriasis Rosea," by Ludwig Weiss, New York. Discussion by Anthony, Illinois; Bulkley, New York; Brayton, Indiana; Heidingsfeld, Ohio; Fordyce and Weiss, New York.

Paper, "Scarlet Fever," by William L. Baum, Chicago. Discussion by Schamberg, Pennsylvania; Brayton, Indiana; Anthony, Illinois; Weiss, New York, and Baum, Illinois.

Paper, "Influence of the Menstrual Function on Certain Skin Diseases," by L. Duncan Bulkley, New York. No discussion.

On the suggestion of the Chairman a motion was made by Dr. Anthony, Illinois, seconded by Dr. Schamberg, Pennsylvania, and carried that the action taken yesterday in regard to the paper of Dr. de Lisle be reconsidered and the paper referred to the Executive Committee.

Dr. Weiss, New York, exhibited lantern slides illustrating his paper.

Dr. Heidingsfeld, Ohio, exhibited lantern slides in preliminary investigations of cutis atrophica.

Paper, "A Case of Blastomycetic Dermatitis from Accidental Inoculation," by Newton Evans, Battle Creek, Mich. Discussion by Brayton, Indiana; Dyer, Louisiana; Heidingsfeld, Ohio; Anthony, Illinois; Fordyce, New York, and Evans, Michigan.

A vote of thanks was given Dr. Dyer and his assistants, Drs. Menage and Hopkins, for courtesies shown.

The Section then adjourned.

Section on Laryngology and Otology.

TUESDAY, MAY 5—AFTERNOON.

This Section was called to order at 2:18 p. m. The Chairman, George L. Richards, of Fall River, Mass., presided; J. F. Barnhill, Indianapolis, Secretary.

The Secretary announced the Section banquet for the evening, a clinic at the Throat Hospital between 9 and 10 a. m. Wednesday, and a buffet luncheon 12 to 2 p. m. Wednesday.

The Chairman announced that all the members of the Executive Committee were absent, and inasmuch as there impending some important matters for the consideration of this committee, the following were appointed members: O. Joachim, New Orleans; A. G. Woolen, Indianapolis, and C. M. Cobb, Boston.

The address of the Chairman was delivered by Geo. L. Richards.

"Report of Cases, Showing Instrument and Technic in the Cure of Deafmutism." Maury M. Stapler, Macon, Ga. Discussed by O. Joachim, New Orleans; B. M. Behrens, Memphis; C. M. Cobb, Boston; Cox, Rome, Ga.; R. C. Myles, New York; H. W. Loeb, St. Louis, A. W. de Roaldes, New Orleans; Snow, Syracuse, N. Y.; and Stapler.

On motion, discussions were limited to three minutes.

"Membranous Pharyngitis." John McReynolds, Dallas, Texas. Discussed by R. C. Myles, New York; B. M. Behrens, Memphis; F. W. Hilscher, Spokane; B. R. Shurly, Detroit, and McReynolds.

"Nasal Polypus; Origin and Treatment." Charles H. Baker, Bay City. Discussed by R. C. Myles, New York; H. W. Loeb, St. Louis; Miner, Detroit; C. M. Cobb, Boston; W. Scheppegrell, New Orleans; F. W. Hilscher, Spokane, and Baker.

"Diphtheria of the Nose." W. Scheppegrell, New Orleans, read by title.

On motion by Dr. Myles, seconded and unanimously passed, Dr. Scheppegrell was asked to give the Section a talk on the use of the *x*-ray.

The following Nominating Committee was appointed: Myles, New York; Loeb, St. Louis, and Pearce, Chicago.

WEDNESDAY, MAY 6—MORNING.

The Section met in the Eye, Ear, Nose and Throat Hospital at 9 a. m.

"Some Observations on the Removal of Diseased Tonsils" was read by Charles M. Robertson, Chicago, who also demonstrated his method of operating. [This was discussed later.]

The Section then repaired to the College of Pharmacy, reconvening at 10 a. m.

W. Scheppegrell, New Orleans, moved that the retiring Chairman be one of the representatives of the Section to the House of Delegates, and that he choose from the floor the other member. The motion was seconded and unanimously passed.

"The Necessity for an Early Diagnosis and Treatment in Acute Suppurative Affections of the Middle Ear." Frank D. Boyd, Fort Worth, Texas. Discussed by H. Dupuy, New Orleans; Philip Hammond, Boston; E. C. Ellett, Memphis; D. A. Kuyk, Richmond; Harmon Smith, New York; Baker, Bay City, Mich.; Woodson, Birmingham; De Vilbiss, Toledo; J. F. Barnhill, Indianapolis; George L. Richards, Fall River, Mass.; Kate Baldwin, Philadelphia; Parker, Detroit; C. M. Cobb, Boston; J. F. Hill, Memphis; W. Scheppegrell, New Orleans, and Boyd.

A patient, from whom a necrosed arytenoid cartilage had been removed, was presented by W. Scheppegrell, New Orleans.

"Report of a Case of Empyema of the Frontal Sinus." C. A. Thigpen, Montgomery, Ala. Discussed by Myles, New York; Gordon King, New Orleans; O. T. Freer, Chicago; Pfingst, Louisville; George L. Richards, Fall River, Mass.; Homer Dupuy, New Orleans; E. E. Ingals, Chicago, and Thigpen.

The discussion of Charles M. Robertson's paper was then taken up, and was participated in by Hilscher, Spokane, Wash.; Miner, Detroit; J. F. Barnhill, Indianapolis; E. Fletcher Ingals, Chicago; Myles, New York; Loeb, St. Louis; George L. Richards, Fall River, Mass., and Robertson.

WEDNESDAY, MAY 6—AFTERNOON.

Convened at 2:35 p. m.

"Paraffin Injected Subcutaneously for the Correction of Nasal and Other Deformities." Harmon Smith, New York. Discussed by O. Joachim, New Orleans; J. F. Barnhill, Indianapolis; Robert C. Myles, New York; C. M. Cobb, Boston; E. Fletcher Ingals. Chicago, and Smith.

"The Special Influence of High Altitude on the Nose and Throat." S. E. Solly, Colorado Springs. Discussed by Melville Black, Denver; Sargent F. Snow, Syracuse, and Myles.

"A General Consideration of the Diseases of the Ethmoid Bones and Cells." Robert C. Myles, New York. Discussed by E. Fletcher Ingals, Chicago; Sargent F. Snow, Syracuse, and Solly.

"Non-Tubercular Hemorrhages of the Air Passages." L. F. Page, Indianapolis. No discussion.

"The Resection Operation for the Correction of Deflections of the Nasal Septum." Otto T. Freer, Chicago. Discussed by O. Joachim, New Orleans; J. F. Barnhill, Indianapolis; Schambaugh, Chicago; B. R. Shurly, Detroit; Gradle, Chicago; Hill, Memphis, and Freer.

R. C. Myles, New York, on behalf of the Nominating Committee, reported the following nominations: Chairman, J. F. Barnhill, Indianapolis; secretary, Otto T. Freer, Chicago; member of House of Delegates, George L. Richards, Fall River, Mass. These were elected.

THURSDAY, MAY 7—MORNING.

The Section convened at 9:30 a. m.

The following communication was read by the Secretary:

CINCINNATI, OHIO, April 27, 1903.

To the Secretary of the Section on Laryngology and Otology, American Medical Association:

Enclosed please find a resolution which was acted on by the Academy of Ophthalmology and Oto-Laryngology (formerly the Western Ophthalmologic and Oto-Laryngologic Association) at its regular annual meeting, which was held in Indianapolis, April 9 to 11.

Will you kindly read this resolution before your society at its next meeting, and if the sentiment [illegible] the approbation of your members, will you [illegible] endorsing the ideas inculcated is voted on by [illegible]

Will you kindly notify me after the regular meeting of your society what action was taken in reference to the matter?

I enclose the names of six societies which have been invited to join this federation. Any suggestions which your organization might make in reference to enlarging the idea expressed, etc., will be gratefully received.

DERRICK T. VAIL, Secretary.

THE ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

At the annual meeting of the Academy of Ophthalmology and Oto-Laryngology (formerly known as the Western Ophthalmologic and Oto-Laryngologic Association), held in Indianapolis, April 9, 10 and 11, 1903, the following resolution was proposed by the president, Dr. William L. Ballenger, and seconded by the secretary, Dr. Derrick T. Vail, and adopted by the academy:

Resolved, That the Academy of Ophthalmology and Oto-Laryngology deem it wise to correspond with all other American associations devoted to the consideration of diseases of the eye, ear, nose and throat, with a view of establishing a federation of the said societies. The said federation to meet in joint session once every five years for the consideration of scientific and other subjects pertaining to the eye, ear, nose and throat.

It is suggested that the first meeting of the proposed federation be held at a time and place to be agreed on in the year 1906, or at such other time as may be selected.

WILLIAM L. BALLENGER, President.
DERRICK T. VAIL, Secretary.

Societies invited to joint the federation: American Laryngological Association; American Laryngological, Rhinological and Otological Society; American Otological Society; Section on Laryngology and Otology, American Medical Association; Section on Ophthalmology, American Medical Association; American Ophthalmological Society; Academy of Ophthalmology and Oto-Laryngology.

W. Scheppegrell, New Orleans, Chairman *pro tem*, said: I have had the honor at one time to be the president of the Academy of Ophthalmology and Oto-Laryngology, and I would therefore invite your especial consideration to this subject. I think very highly of this proposition. It would do a great deal to bring the different elements and societies together, and it might do us a great deal of good. We would derive a still greater benefit if we had a wider field to draw from. Therefore, I would suggest that someone make a motion that a special committee be appointed by the Chair to take this matter up and make such arrangements with the Academy of Ophthalmology and Oto-Laryngology as may further this purpose.

D. A. Kuyk, Richmond, said: It gives me great pleasure to move that the Chairman appoint a committee of three, looking to the furtherance and completion of the suggestions just made.

The motion was seconded and passed unanimously.

"How Far Should the Specialist in Rhinology and Otology Presume to Treat the Systemic Condition?" C. M. Cobb, Boston. Discussed by G. V. Woolen, Indianapolis; Sargent F. Snow, Syracuse; Schambaugh, Chicago; D. A. Kuyk, Richmond; W. Scheppegrell, New Orleans; Charles H. Baker, Bay City, Mich.; Joachim, New Orleans; Loeb, St. Louis; Crum, Utica; George L. Richards, Fall River, and Cobb.

"Report of Three Cases: 1. Case of Prolonged Intubation. 2. Esophageal Obstruction Due to Swallowing an Upper Alveolar Plate. 3. A Partial Extirpation of the Larynx for Carcinoma." George F. Cott, Buffalo. Discussed by B. R. Shurly, Detroit; D. A. Kuyk, Richmond; Otto T. Freer, Chicago, and Cott.

"The Early Manifestations of Laryngeal Tuberculosis: Their Recognition and Treatment." H. H. Briggs, Asheville. Discussed by Schuster, El Paso, Texas, and Briggs.

"The Immediate Relief of Hysterical Manifestations in the Larynx by Suggestion." H. W. Loeb, St. Louis. Discussed by D. A. Kuyk, Richmond; Hirschel, Spokane; J. F. Barnhill, Indianapolis; H. Dupuy, New Orleans; C. M. Cobb, Boston, and Loeb.

"Some Recent Experiences with Chronic Suppurations of the Ear." Philip Hammond, Boston. Discussed by H. Dupuy, New Orleans; Hirschel, Detroit; J. F. Barnhill, Indianapolis; C. M. Cobb, Boston; George L. Richards, Fall River, and Hammond.

The following committee was appointed by the Chair to consult with the Academy of Ophthalmology and Oto-Laryngology, as comprehended in the motion made by D. A. Kuyk: H. W. Loeb, St. Louis, representing the Academy; Sargent F. Snow, Syracuse, representing the American Laryngological, Rhinological and Otological Society, and C. H. Baker, Bay City, representing this Section.

THURSDAY, MAY 7—AFTERNOON.

The Section convened at 2:15 p. m.

The election of officers resulted thus: President, J. F. Barnhill, Indianapolis; secretary, Otto T. Freer, Chicago; member of House of Delegates, George L. Richards, Fall River, Mass.

"(*a*) The Distribution of Blood Vessels in the Labyrinth of the Ear, with Exhibition of Preparation and Drawing. (*b*) Wood's Metal Casts of the Middle Ear, with the Exhibition of Preparation and Lantern Demonstration." George E. Schambaugh, Chicago.

S. E. Solly, Colorado Springs, moved that the Section pass a vote of thanks for the beautiful exhibition of original work by Dr. Schambaugh. The motion was seconded by J. F. Barnhill, Indianapolis, and passed unanimously.

"Perisinusal Abscess of Lateral Sinus, with Metastases in Liver and Sterno-Clavicular Arthritis." Gordon King, New Orleans.

"Efficacy of Treatment of Acute Suppurative Otitis by Aseptic Drainage." H. Gradle, Chicago.

"The Great Value of Drainage and Ice in the Early Stages of Mastoiditis." Sargent F. Snow, Syracuse.

The above two papers were discussed by J. F. Barnhill, Indianapolis; Ledbetter, Birmingham, Ala.; Brown, Minneapolis; Hammond, Boston; George L. Richards, Fall River; C. M. Cobb, Boston; Hilscher, Spokane; D. A. Kuyk, Richmond; Donovan, Dubuque, Mont.; Stapler, Macon, Ga.; Gradle and Snow.

"Deformity of the Nasal Septum in Atrophic Rhinitis. Shall We Operate?" Kate W. Baldwin, Philadelphia.

On motions, duly seconded, the papers by Drs. Behrens and Joachim were read by title and referred to the Executive Committee.

Adjourned.

Section on Materia Medica, Pharmacy and Therapeutics.

TUESDAY, MAY 5—AFTERNOON.

The meeting was called to order by the Chairman, Solomon Solis-Cohen, at 2:35 p. m.

The Committee on Dosage of Liquid Medicines, Frank Woodbury, H. C. Wood, Jr., and A. Eshner, Philadelphia, made its report.

On motion the report was received and the committee discharged.

The Committee on Nerve Nostrums and Drug Addictions, A. W. Baer, Chicago; W. J. Robinson, New York, and H. C. Wood, Jr., Philadelphia, made its report.

On motion the report was received and the committee discharged.

The Secretary read a communication from the American Pharmaceutical Association, inviting this body to appoint delegates to the American Pharmaceutical Association.

The Chairman read his address.

The paper of Arthur R. Cushney, Ann Arbor, entitled "Is Pharmacologic Action Determined by Chemical Structure or by Physical Characters?" was read by Dr. Burdick.

M. Vejux Tyrode, Boston, read a paper entitled "The Relations Between the Pharmacologic Actions of Drugs and Their Therapeutic Indications."

The paper of Torald Sollmann, Cleveland, Ohio, entitled "Research Problems of Pharmacology," was read by the Chairman.

The paper, "The Physiologic Effect of the Ions," by Ralph N. Webster, Chicago, was read by title.

Discussion on all these papers was participated in by H. C. Beates, Philadelphia; W. J. Robinson, New York; W. W. Tompkins, West Virginia, and M. V. Tyrode.

A paper entitled "Mechano-Therapy, Massage, Bone Setting and Osteopathy," by John Madison Taylor, Philadelphia, was read by title.

On motion the recommendations of the Committee on Dosage of Liquid Medicines were adopted, as follows:

To the House of Delegates The following resolutions have been adopted by the Section on Materia Medica, Pharmacy and Therapeutics, and the delegate from that Section instructed to present them to the House of Delegates, with the recommendation that they be adopted by the Association:

Resolved, That teachers of medicine and pharmacy, editors of medical and pharmaceutic journals and authors of text-books are respectfully requested to give precedence to the metric method in the writing of all medical formulas and that, for the administration of doses of less than a teaspoonful, the quantity be stated in drops delivered from a standard medicine dropper or pipette of three millimeters external diameter, which will deliver twenty drops of water at 15 C., which will measure one cubic centimeter when dropped at the rate of one per second, and that the teaspoonful be considered as equivalent to five cubic centimeters and that the tablespoonful be considered as equivalent to fifteen centimeters; and

Resolved, That the orthography, abbreviations, etc., of the International Bureau, or as revised by the National Bureau of Standards at Washington, shall also be recommended for adoption in medical and pharmaceutic publications; and

Resolved, That a copy of these resolutions be transmitted to the Committee of Revision of the United States Pharmacopeia for 1900, with the request that they be incorporated, as far as possible, in the United States Pharmacopeia.

On motion the recommendations of the Committee on Nerve Nostrums and Drug Addictions were adopted, as follows:

To the House of Delegates: The following resolutions have been adopted by the Section on Materia Medica, Pharmacy and Therapeutics and the delegate from that Section to the House of Delegates instructed to present them to the House of Delegates.

In view of the spread in the growth of the use and abuse of proprietary remedies, the Section recommends:

1. That newspapers which do not print objectionable medical advertisements are entitled to and should receive the favor and preference of medical men.
2. That articles on the dangers arising from the use of quack nostrums should be written for such newspapers for publication.
3. That the Committee on National Legislation be asked to consider the feasibility of the introduction in the next House of Representatives of an interstate measure prohibiting or limiting the sale of poisonous and dangerous patent medicines.
4. That no medicinal preparation for internal use, as distinguished from antiseptics, disinfectants, cosmetics and dietetics, advertised as a remedy or cure to the laity, is entitled to the patronage of physicians, nor should such be admitted to the pages of the medical journals, nor to the exhibitions of the American Medical Association.
5. That manufacturers be requested to print the scientific or chemical names under the trade name of all pharmaceutic or chemical preparations.
6. That the general plan and object of the National Bureau of Medicines and Foods are entitled to a further careful investigation by a special committee of the American Medical Association.

On motion, Delegate Hill was instructed to present to the House of Delegates the recommendations of these committees.

On motion of Dr. Hill it was resolved that a committee of three be appointed, the Chairman to be one member, to draft a memorial to the Business Committee of the House of Delegates to oppose the contemplated change in the title of this Section by omitting the word "therapeutics."

The committee was Drs. Cohen, Beates and Hill.

The Chair appointed the Nominating Committee, as follows: Drs. Robinson, chairman, Tompkins and Slack.

C. A. Mayo, New York, delegate from the American Pharmaceutical Association to the Section, on invitation by the Chairman, briefly responded for this association.

Dr. Robinson moved that three delegates be appointed to attend the meeting of the American Pharmaceutical Association. [illegible] and carried.

On motion a resolution was adopted looking to the admission as associate members reputable pharmacists who are members of the American Pharmaceutical Association.

On motion, Dr. Hill was instructed to present this resolution to the Business Committee of the House of Delegates.

On motion adjourned to 9:30 a. m.

Wednesday, May 6—Morning.

The meeting was called to order by the Chairman at 9:50 a. m.

The minutes of the previous session were read, corrected and approved.

On motion the paper entitled "The Chemistry of Ergot," by A. B. Lyons, Detroit, was read by title.

Laura House Bronson, Iowa City, Iowa, read a paper entitled "Mercury." Discussion by Oliver T. Osborne, New Haven; W. J. Robinson, New York; W. W. Tompkins, West Virginia; S. Solis-Cohen, Philadelphia, and Bronson.

On motion W. S. Hall's paper was postponed to the afternoon session.

Arthur R. Elliott, Chicago, read a paper entitled "The Limitations of the Antidiabetic Diet." Discussion by H. C. Beates, Philadelphia; A. C. Croftan, Chicago; O. T. Osborne, Connecticut; W. J. Robinson, New York; W. B. Hill, Milwaukee; E. T. Shelley, Kansas; H. H. Moody, Alabama; G. W. Webster, Chicago; W. W. Tompkins, West Virginia; the Chairman, and A. R. Elliott.

It was moved that an effort be made to read and discuss all papers on the program by Thursday afternoon. Seconded and carried.

On motion adjourned to 2 p. m.

Wednesday, May 7—Afternoon.

Meeting called to order by Chairman at 2:15 p. m.

T. D. Crothers, Connecticut, read a paper entitled "Demonstrated Pathologic Effects of Alcohol."

O. T. Osborne, Connecticut, read a paper entitled "The Legitimate Therapeutic Uses of Alcohol."

Both papers were discussed by J. H. Musser, Philadelphia; J. A. Storck, New Orleans; W. J. Robinson, New York; A. C. Croftan, Chicago; C. S. N. Hallberg, Chicago, and the Chairman.

Paper by A. A. Eshner, Philadelphia, on "The Management of Fever in General," was read by title.

J. H. Musser, Philadelphia, read a paper entitled "The Therapeutic Value of Spinal Puncture for the Cerebral Symptoms of Typhoid Fever." Discussed by W. J. Robinson, New York; W. W. Tompkins, West Virginia; O. T. Osborne, Connecticut, and Musser.

J. A. Storck, New Orleans, read a paper entitled "Intestinal Antiseptics; Their Uses and Limitations." Discussed by O. T. Osborne, Connecticut; George F. Butler, Michigan; W. J. Robinson, New York; B. C. Keister, Virginia, and Storck.

W. S. Hall, Chicago, read a paper entitled "The Absorption of Iron from the Alimentary Canal." Discussed by G. F. Butler, Michigan; W. W. Tompkins, West Virginia, and C. S. Chamberlain, Ohio.

W. J. Robinson, New York, read a paper entitled "The Composition of Some of the So-called New Synthetics." Discussed by George F. Butler, Michigan; C. A. Mayo, New York; W. W. Tompkins, West Virginia; J. A. Storck, New Orleans; Rawlins, Tennessee; B. C. Keister, Virginia; C. E. Skinner, Connecticut; H. N. Leavell, Kentucky; C. S. N. Hallberg, Chicago; C. S. Chamberlain, Ohio; B. Pirosh, Chicago, and Robinson.

Dr. Storck moved that a committee of three be appointed by the Chair to consider the suggestion contained in Dr. Robinson's paper, with instructions to report to-morrow, with such recommendations as they may deem appropriate.

The Chair appointed Drs. Butler, Tompkins and Hallberg.

On motion adjourned to 9:30 a. m.

Thursday, May 7—Morning.

Meeting was called to order by the Chairman at 9:40 a. m.

Minutes of previous day read and approved.

N. S. Davis, Jr., Chicago, read a paper entitled "Exercise as a Mode of Treatment in Heart Diseases." Discussion by H. H. Moody, Alabama; W. W. Tompkins, West Virginia; the Chairman and Davis.

On motion, the paper entitled "Recent Advances in Actino-Therapy," by W. S. Gotthell, New York, was read by title.

Clarence E. Skinner, New Haven, read a paper entitled "Superheated Air in Therapeutics." Discussion by W. J. Robinson, New York; W. W. Tompkins, West Virginia, and Skinner.

C. S. N. Hallberg, Chicago, read a paper entitled "The United States Pharmacopeia." Discussion by W. J. Robinson, New York; J. V. Kelly, Philadelphia; Pirosh, Chicago; W. B. Hill, Wisconsin; O. T. Osborne, Connecticut; H. A. Moody, Alabama; F. Weber, Milwaukee; Chamberlain, Ohio, and Hallberg.

W. B. Hill, Milwaukee, read a paper entitled "The Limitations in the Use of Aconite and Veratrum Viride." Discussion by F. Weber, Milwaukee; H. A. Moody, Alabama; W. J. Robinson, New York; W. W. Tompkins, West Virginia; C. S. Chamberlain, Ohio; Kahle, Indianapolis; Leavell, Louisville; the Chairman and Hill.

Caswell A. Mayo, New York, read a paper entitled "Spurious Creosotes." Discussion by B. C. Keister, Virginia; W. W. Tompkins, West Virginia, and Mayo.

The following resolution was unanimously adopted:

Resolved, That, in the opinion of the Section on Materia Medica, Pharmacy and Therapeutics, the term "creosote" should be restricted solely to true wood-tar creosote, owing to the great danger arising from the present indiscriminate use of the term; and prescribers are requested to specify beech-tar creosote in order to properly distinguish the article from coal-tar creosote.

On motion adjourned to 2:30 p. m.

Thursday, May 7—Afternoon.

Meeting called to order by the Chairman at 2:35 p. m.

The Nominating Committee made the following report: For chairman, Oliver T. Osborne, New Haven, Conn.; secretary, Carl S. N. Hallberg, Chicago; delegate, W. J. Robinson, New York.

On motion the report of the committee was accepted and the officers nominated were declared elected.

George F. Butler, Alma, Michigan, read a paper entitled "Drugs Used in Nervous Diseases." Discussion by the Chairman.

Bittle C. Keister, Roanoke, Va., read a paper entitled "The Mind as a Causative and Therapeutic Factor in Medicine." Discussion by Ballard, Memphis; Slack, La Grange, Ga.; George F. Butler, Michigan; the Chairman; C. S. Chamberlain, Ohio; W. J. Robinson, New York; Betty, Memphis; W. W. Tompkins, West Virginia; H. A. Moody, Alabama, and Keister.

The committee appointed to report on the suggestions contained in Dr. Robinson's paper made the following report:

This committee, to which the paper of W. J. Robinson, New York, was referred, while fully agreeing with the sentiment expressed by the author, would suggest, in view of the present status of this question of proprietary medicine, that the paper may be so modified by the Editor of The Journal as to avoid any undesirable complications.

The committee, in view of the importance of the subject, respectfully makes these recommendations:

1. That, inasmuch as the primary cause of the proprietary medicine evils is the lack of knowledge on the part of medical graduates, the course in materia medica should be supplemented during the last year in connection with therapeutics by a course in pharmacy especially designed to qualify the student to formulate his own prescriptions in the most eligible manner.

2. A closer adherence to the United States Pharmacopeia and the National Formulary as a basis for text-books and instruction will lead to a greater appreciation of the official drugs and chemicals and formulas of the recognized medical authorities.

3. That some well-considered plan should be inaugurated for the differentiation of the thousands of medicinal articles and specialties to remove the present existing confusion among physicians and pharmacists alike, and to afford some kind of criteria to their ethical status, and to separate the true from the false.

4. That the revision of the patent laws, as applied to medicines, trade-marks and copyrights should be demanded.

5. That the primary object of a medical journal published by medical men or societies should be to chronicle the work of the profession it represents, and the general diffusion of medical knowledge, and not for the purpose of making money, commercial domination through the advertising privileges being derogatory to the profession.

6. It is recommended that a committee of competent persons be appointed to act as an advisory board in determining the limitations and privileges of advertisements appearing in The Journal and in the exhibits of the American Medical Association.

On motion the report and recommendations were adopted and the committee discharged.

The Chair announced the following delegates to the American Pharmaceutical Association: Hallberg, Robinson, Slack, Tompkins and Leavell.

The Secretary read a communication from the U. S. census office.

On motion the following committee was appointed to further consider the subject of suggestions contained in Dr. Robinson's paper and the report of the previous committee and report at the next session of this body, viz.: Moody, Robinson and Hallberg.

On motion a vote of thanks was tendered the trustees of the Carondelet Street M. E. Church for the use of their building; to the Committee of Arrangements and the medical profession of New Orleans and Louisiana for courtesies extended.

On motion a vote of thanks was tendered the Chairman and Secretary.

On motion adjourned, to meet in Atlantic City in 1904.

Section on Pathology and Physiology.

Tuesday, May 5—Afternoon.

Called to order at 2:30 p. m.

Address by the Chairman, Victor C. Vaughan of Ann Arbor, Mich.

Abstract of Papers 1 to S, being contributions from the Hygienic Laboratory of the University of Michigan, reported by Victor C. Vaughan, director.

(1) "The Chemistry of the Bacillus Coli Communis," by Mary F. Leach, Ann Arbor.

(2) "The Chemistry of the Bacillus Typhosus," by May Wheeler, Ann Arbor.

(3) "The Toxicity of the Intracellular Substance of Bacillus Typhosus," by Louis M. Gelston, Ann Arbor.

(4) "The Anthrax Toxin," J. Walter Vaughan, Ann Arbor.

(5) "The Intracellular Toxin of Bacillus Pyocyaneus," by Daniel McIntyre, Ann Arbor.

(6) "A Preliminary Chemical Study of the Hepatic Cells of the Ox," Frank Spencer and Frederick Munson, Ann Arbor.

(7) "The Toxicogenic Bacteria Found in Drinking Water," William G. Carhart, Ann Arbor.

(8) "The Chemical Tests for Morphin in the Presence of the Products of Bacterial Decomposition," by Myron W. Clift, Ann Arbor.

Discussion on the above by Henry A. Christian, Boston; A. C. Croftan, Chicago; W. S. Carter, Galveston; Joseph McFarland, Philadelphia.

The Secretary made announcement of the banquet.

Paper by Walter L. Bierring, Iowa City, Iowa: "Multiple Periosteal Sarcomata of the Cranium, with Involvement of Retroperitoneal Lymph Nodes and Attending Severe Anemia.

Appointment of Nominating Committee: E. R. LeCount, Chicago; W. L. Bierring, Iowa City; Frank B. Wynn, Indianapolis.

Discussion of Dr. Bierring's paper by E. R. LeCount, Chicago, and Henry A. Christian, Boston.

Wednesday, May 6—Morning.

Paper by E. A. de Schweinitz, Washington, D. C., read by Joseph McFarland, Philadelphia. Discussed by Dorset, Washington, D. C.; L. Hektoen, Chicago; Victor C. Vaughan, Ann Arbor; Joseph McFarland, Philadelphia.

Paper by Joseph McFarland, Philadelphia: "Studies of Antirennene." Discussed by L. Hektoen, Chicago; J. W. Foss, Phœnix, Ariz.

Paper by W. S. Carter, Galveston, Tex.: "The Protoplasmic Activity of the Renal Epithelium as Determined by the Elimination of Pigments Injected into the Circulation." Discussed by E. R. LeCount, Chicago.

Paper by L. W. Dean, Iowa City, Iowa: "The Influence of Consanguinity on the Organs of Special Sense, Especially on the Organs of Vision." Discussed by J. W. Foss, Phœnix, Ariz.

Paper by J. W. Foss, Phœnix, Ariz.: "Streptococcic Infection of the Lungs, Successfully Treated by Antistreptococcic Serum." Discussed by Guido Bell, Indianapolis; H. N. Graves, Georgetown, Tex.; W. S. Carter, Galveston; Louis Leroy, Nashville, Tenn.

Nominating Committee reported as follows: Chairman, Joseph McFarland, Philadelphia; secretary, Henry T. Christian, Boston; delegate, A. P. Ohlmacher, Gallipolis, Ohio, all of whom were elected.

WEDNESDAY, MAY 6—AFTERNOON.

Paper by J. M. Frazier, Belton, Tex. Discussed by H. B. Ward, Lincoln, Neb.

Paper by Henry B. Ward, Lincoln, Neb.: "Precision in the Determination of Human Parasites." Discussed by Frank B. Wynn, Indianapolis; W. L. Bierring, Iowa City; Allen J. Smith, Galveston, Tex.

Paper by Thomas S. Cullen, Baltimore, Md.: "Condition of the Endometrium in Case of Uterine Myomata." No discussion.

Paper by Louis Leroy, Nashville, Tenn.: "A Case of Aerogenes Capsulatus Infection of the Neck." Discussed by L. Hektoen, Chicago.

Paper by Henry A. Christian, Boston: "The Neuroglia and the Ependymal Epithelium of Teratoid Tumors." Discussed by L. Hektoen.

Paper by L. Hektoen, Chicago: "A Case of Short-Limbed Dwarfism," illustrated with lantern slides.

Paper by E. R. LeCount, Chicago, in the name of Peter Bassoe, Chicago: "A Case of Gigantism and Leontiasis Ossea," with lantern demonstration.

Paper by F. G. Novy and W. J. McNeal, Ann Arbor: "The Cultivation of Trypanosoma Lewisii." Discussed by H. B. Ward, Lincoln, Neb.

Adjourned, after vote of thanks to the retiring officers.

THURSDAY, MAY 7—AFTERNOON.

Paper by Newton Evans and F. J. Otis, Battle Creek, Mich.: "The Morphology and Biology of the Parasites of Blastomycetic Dermatitis," with lantern demonstration. No discussion.

Paper by Claude A. Smith, Atlanta, Ga.: "Further Observations of Ankylostomiasis in the South. Discussed by H. B. Ward, Lincoln, Neb.

Paper by J. G. Holmes, Chicago, read by W. S. Hall, Chicago: "The Working Capacity of a Muscle. Discussed by Henry Sewall, Denver.

Demonstration of new physiologic apparatus. Winfield S. Hall, Chicago.

On motion the following papers were read by title:

W. S. Newcomet, Philadelphia: "Tissue Changes under X-Ray Influence."

F. Robert Zeit, Chicago: "Endothelioma of the Uterus."

Final adjournment.

NAMES OF THOSE REGISTERED AT THE NEW ORLEANS SESSION.

We give below the names and residences of those who registered at New Orleans, at the fifty-fourth annual session of the American Medical Association. About 160 failed to indicate any preference as to sections. Through an error, discovered too late to allow a correct list to be prepared, these names were incorporated in the list of those registering in the Section on Practice of Medicine, but not in the summary below.

SUMMARY BY SECTIONS.

Section on Practice of Medicine	662
Section on Obstetrics and Diseases of Women	140
Section on Surgery and Anatomy	628
Section on Hygiene and Sanitary Science	25
Section on Ophthalmology	151
Section on Diseases of Children	44
Section on Stomatology	11
Section on Nervous and Mental Diseases	40
Section on Cutaneous Medicine and Surgery	28
Section on Laryngology and Otology	52
Section on Materia Medica, Pharmacy and Therapeutics	20
Section on Pathology and Physiology	32
Registered without expressing preference as to Section	160
*Miscellaneous	13
Total	2,006

* This includes those whose names or addresses it was impossible to verify and which have been omitted from the list of names below.

SUMMARY BY STATES.

Alabama	66
Arizona	3
Arkansas	46
California	24
Colorado	22
Connecticut	11
Delaware	2
District of Columbia	11
Florida	8
Georgia	27
Illinois	189
Indian Territory	7
Indiana	103
Iowa	73
Kansas	17
Kentucky	82
Louisiana	311
Maine	3
Maryland	22
Massachusetts	26
Michigan	73
Minnesota	37
Mississippi	101
Missouri	68
Montana	5
Nebraska	22
New Hampshire	4
New Jersey	18
New Mexico	3
New York	71
North Carolina	12
North Dakota	2
Ohio	139
Oklahoma	3
Oregon	2
Pennsylvania	114
Rhode Island	5
South Carolina	5
South Dakota	5
Tennessee	73
Texas	84
Utah	5
Vermont	6
Virginia	17
Washington	7
West Virginia	12
Wisconsin	62
Wyoming	1

The total registration in 1900 at the Atlantic City session was 2,019; in 1901 at St. Paul, 1,806; in 1902 at Saratoga Springs, 1,425; in 1903, at New Orleans, 2,006.

Section on Practice of Medicine.

Alcorn, Edw., Houstonville, Ky.
Ambler, C. P., Ashville, N. C.
Archinard, John J., New Orleans.
Ashbaugh, A., Denver.
Acker, T. J., Croton-on-Hudson, N. Y.
Arnold, L. W., Florence, Ala.
Amster, L., Atlanta, Ga.
Anders, J. M., Philadelphia.
Arnold, J. H., Versailles, Ky.
Amendson, A. C., Cambridge, Wis.
Andrus, S. C., Rockford, Ill.
Allee, W. S., Olean, Mo.
Alison, Hartwell L., Bayou La Chute, La.
Alison, J. S., Monroe, La.
Allain, A. A., Bayou Goula, La.
Alcorn, A. J., Chicago.
Ayo, S. A., Thibodeaux, La.
Anderson, Wm. E., Farmville, Va.
Allen, J. C., Baton Rouge, La.
Alford, J. M., Ellisville, Miss.
Abbott, Louis Lee, New Orleans.
Altexander, M. J., Tunica, Miss.
Ambler, C. P., Asheville, N. C.
Blair, A. McN., Buffalo, N. Y.
Bayon, H., New Orleans.
Bell, Geo. S., New Orleans.
Brookes, J. S., Robinsonville, Miss.
Burns, Wm. B., Memphis, Tenn.
Bass, C. C., Columbus, Miss.
Browne, M. S., Winchester, Ky.
Butler, J. T., Brookhaven, Miss.
Berry, R. D., Springfield, Ill.
Brown, G. A., Bear Poplar, Ill.
Brown, J. S., Salsbury, N. C.
Branch, B. L., Collierville, Tenn.
Biener, Geo., Port Allen, La.
Bohanon, J. G., Greensville, Ky.
Braun, W. T., Memphis, Tenn.
Brooks, Harriet B., Saginaw, Mich.
Benbrook, J. T., Rockwall, Tex.
Brady, C. Milo, New Orleans.
Burns, W. W., Polo, Ill.
Bruner, Benj. L., Hardyville, Ky.
Buquoi, J. F., Pt-a la-Hache, La.
Brister, S. L., Greenwood, Miss.
Bonnett, A. O., Columbus, Ohio.
Ballowe, H. L., Diamond, La.
Bass, W. H., Agr. College, Miss.
Bennett, W. C., Mt. Gilead, Ohio.
Black, Wm. T., Memphis, Tenn.
Barlow, E. E., Dermott, Ark.
Burrows, H. H., New Boston, Tex.
Boggess, W. F., Louisville, Ky.
Brunning, Francis, Cincinnati.
Brayton, A. W., Indianapolis.
Boggs, W. R., Macon, Ill.
Burlingame, D. E., Elgin, Ill.
Bermus, Wm. M., Jamestown, N. Y.
Bower, W. C., Lebanon, Kan.
Broadstreet, S. C., Mt. Pleasant, Tex.
Beard, Frank M., Shelbyville, Ky.
Bush, A. R., Sligo, La.
Barcus, Paul J., Crawfordsville, Ind.
Broidrick, Jas. P., Boston.
Brown, J. A., Germantown, Ohio.
Brandau, John W., Clarksville, Tenn.
Burroughs, H. S., Pittsburg, Pa.
Barry, Wm. R., Emory, Tex.
Bartlett, Rufus, Chicago.
Ball, Otho F., St. Paul, Minn.
Barron, A. F., St. Francisville, La.
Bernus, W. M., Jamestown, N. Y.
Brown, Everett J., Decatur, Ill.
Barnette, J. Z., Bon Ami, La.
Berry, W. T., Oakton, Ky.
Butterworth, W. W., N. Orleans.
Bronson, Laura Howe, Iowa City, Iowa.
Bird, Maurice D., Marinette, Wis.
Bucklin, G. W., Muncie, Ind.
Burroughs, J. A., Ashville, N. C.
Bowles, Marion K., Joliet, Ill.
Brundage, N. E., Delphor, Ohio.
Brayton, C. E., Stonington, Conn.
Burbeck, Chas. H., Troy, N. Y.
Boyd, James P., Akron, Ohio.
Bodine, J. M., Louisville, Ky.
Barrier, J. M., Delhi, La.
Batten, J. M., Downington, Tenn.
Barger, J. M., Darlington, Mo.
Buehler, W. S., Wernersville, Pa.
Bailey, Samuel, Mt. Ayr, Iowa.
Billings, Frank, Chicago.
Bourland, I. N., Equality, Ill.
Callison, E. C., Brashear, Mo.
Carruth, F. H., Lobdell, La.
Cottle, C. C., Marshalltown, Iowa.
Cunningham, T. E., Cambridge, Mass.
Collins, E. E., Williamsport, Tenn.
Callan, John, New Orleans.
Claytor, T. A., Washington, D. C.
Chaille, S. E., New Orleans.
Chenault, J. C., England, Ark.
Chambers, Chas., Kasson, Minn.
Clarke, Robt. C., Pittsburg.
Cobleigh, E. A., Chattanooga, Tenn.
Collings, H. P., Hot Springs, Ark.
Champlin, John, Westerly, R. I.
Cooke, H. C., Hattlesburg, Miss.
Curtis, G. Lenox, New York.
Causon, J. C., Valparaiso, Ind.
Castellanos, J. H., New Orleans.
Campbell, R. D., Grand Forks, N. D.
Croftan, A. C., Chicago.
Clay, E. M., Renville, Minn.
Conn, Jos., New Orleans.
Campbell, James, Elgin, Ill.
Carson, L. O., New Argent, Ind.
Crouch, H. T., Bardwell, Ky.
Cole, Geo. L., Los Angeles, Cal.
Calhoun, C. D., Elburn, Ill.
Crow, A. M., Kansas City, Mo.
Cline, Isaac M., New Orleans.
Cusachs, P. L., New Orleans.
Cummings, D. J., Brownstown, Ind.
Colvin, S. J., Minden, La.
Chapman, W. C., Toledo, Ohio.
Crockett, L. A., Indianapolis, Ind.
Cissel, Joseph K., Loretto, Ky.
Conklin, S. A., Canton, Ohio.
Crisler, Julius, Jackson, Miss.
Cole, G. E., Girard, Kan.
Carter, Calvin, Brookeville, Ind.
Carleton, J. C., Bonham, Texas.
Campbell, R. C., Shreveport, La.
Connerly, T. W., San Angelo, Tex.
Campbell, A. D., Cleveland, Ohio.
Caywood, Robert J., Piqua, Ohio.
Chamberlain, L. C., New Orleans.
Christopher, W. H., London, Ohio.
Calvert, W. J., St. Louis.
Charbonnet, T. S., New Orleans.
Crabill, R. J., S. McAlester, I. T.
Campbell, C. L., Sheradenville, Pa.
Cannon, G. E., Jonesboro, La.
Crummer, B. F., Omaha.
Camp, E. T., Gadsden, Ala.
Crockett, S. S., Nashville, Tenn.
Cooper, J. F., Elmwood, Ill.
Carruth, R. McG., New Roads, La.
Culbertson, J. C., Cincinnati.
Carroll, J. R., Henderson, Tenn.
Cameron, D. A., Alpena, Mich.
Catalano, N., New Orleans.
Catchings, C. E., Woodville, Miss.
Cravens, M. H., Arlington, Texas.
Crocker, M. M., Lordsburg, N. M.
Caverly, O. M., Atlanta, Texas.
Cushman, M. R., Abbeville, La.
Crampton, O. L., Mobile, Ala.
Cawdrick, E. E., Enid, Okla.
Clough, E. L., Beaumont, Texas.
Cunningham, R. C., Booneville, Miss.
Dickerson, L. D., McComb City, Miss.
Dempster, R. T., Glendeame, Ky.
Driskell, A. J., Maroin, Miss.
Dupree, J. W., Baton Rouge, La.
De Lamor, W. C., Mountain Hill, Ga.
Duvall, H. C., Milwood, Ky.
Dibrell, J. A., Little Rock, Ark.
Davenport, Edw., Hampton, Ky.
Duchein, C. F., Lecompte, La.
Davis, Oscar, Cistern, Texas.
Donald, J. D., Hattiesbury, Miss.
Dupagnier, E. M., New Orleans.
DeWitt, J. P., Canton, Ohio.
Dennis, C. D., Columbus, Ohio.
Dickes, Ph., Greenville, Ohio.
Dunaway, E. T., Murray, Ky.
Drake, J. W., Louisville, Ky.
Duff, G. C., Chicago.
Dannavant, H. C., Osceola, Ark.
Ducrocq, H. L., Lafourche Crossing, La.

Bottomley, John T., Boston.
Bridges, R. R., Crystal Springs, Miss.
Boyer, J. H., Moreauville, La.
Beach, Wm. M., Pittsburg, Pa.
Bowers, L. G., Richmond, Ind.
Blanchard, F. R., Lakeview, Mich.
Beech, Geo. D., Champion, Mich.
Bacon, Wm. F., York, Pa.
Barber, L. A., Fort Worth, Texas.
Bevan, Arthur Dean, Chicago.
Bacon, L. C., St. Paul.
Bentley, E., Little Rock, Ark.
Bartlett, Willard, St. Louis.
Barr, H. A., Beaumont, Texas.
Banker, A. J., Columbus, Ind.
Berry, J. T. B., Brandon, Miss.
Beck, J. S., Dayton, Ohio.
Bates, F. H., Elmhurst, Ill.
Berteling, J. B., South Bend, Ind.
Barrow, D., Lexington, Ky.
Bain, F. D., Kenton, Ohio.
Becton, Jos., Greenville, Texas.
Ballard, W. R., Saginaw, Mich.
Bloom, J. D., New Orleans.
Brosnan, D. S., New Orleans.
Burke, H. S., Corpus Christi, Texas.
Burtless, W. E., St. Clair, Mich.
Bouvier, J. G., Jeanerette, La.
Bryant, Jos. D., New York.
Blalock, N. G., Walla Walla, Wash.
Boudurant, A. A., Cairo, Ill.
Beckett, W. W., Los Angeles, Cal.
Bishop, W. T., Harrisburg, Pa.
Blinks, E. G., Michigan City, Ind.
Barth, Louis, Grand Rapids, Mich.
Bailey, L. J. C., Stonega, Va.
Beekman, Philip, Natchez, Miss.
Baysinger, M. W., Grand Tower, Ill.
Bevan, Chas. F., Baltimore.
Beacham, W. D., Felder, Miss.
Brackett, A. R., Charles City, Iowa.
Bullitt, J. B., Louisville, Ky.
Baugman, J. A., Neoga, Ill.
Blackburn, J. H., Bowling Green, Ky.
Blum, Henry N., New Orleans.
Batchelor, J. M., New Orleans.
Brant, A. C., Canton, Ohio.
Black, C. E., Jacksonville, Ill.
Bennett, L. F., Beloit, Wis.
Ball, C. D., Santa Anna, Cal.
Carmady, Chas. G., Roanoke, Va.
Carter, C. C., Rock Island, Ill.
Champenois, C., Meridian, Miss.
Chuseman, B. C., Watertown, N. Y.
Calhoun, Wm. W., New Orleans.
Cherry, E. O., Newbern, Tenn.
Chase, R. R., Eau Claire, Wis.
Catching, J. M., Hazlehurst, Miss.
Clay, E. M., Renville, Minn.
Chandler, Fremont E., Chicago.
Chrittenson, C. R., Starbuck, Minn.
Chassaignac, Chas., New Orleans.
Christenson, C., La Crosse, Wis.
Casburn, R. L., Carthage, Ill.
Call, Chas. H., Greeley, Colo.
Campbell, O. B., St. Joseph, Mo.
Cook, Geo., Concord, N. H.
Cooper, S. C., Fort Smith, Ark.
Cunningham, W., Platteville, Wis.
Comstock, G. F., Saratoga Springs, N. Y.
Crigler, L. W., Columbus, Miss.
Crowley, D. D., Oakland, Cal.
Cott, John D., Litchfield, Ill.
Connell, F. G., Leadville, Colo.
Cooke, A. B., Nashville, Tenn.
Coker, C. M., Eden, Miss.
Conner, M. C., Middletown, N. Y.
Carpenter, J. G., Stanford, Ky.
Cox, Wm. C., Everett, Wash.
Coulbourn, J. T., Birmingham, Ala.
Coldwell, T. P., London, Ky.
Chandler, A. W., Compton, Ill.
Clark, S. M. D., New Orleans.
Czarnowski, O., New Orleans.
Collins, C. U., Peoria, Ill.
Crawford, W. W., Hattiesburg, Miss.
Connell, J. P., Fond du Lac, Wis.
Chowning, Thos., Hannibal, Mo.
Chalaron, F. J., New Orleans.
Conley, T. J., Chicago.
Conklin, S. A., Canton, Ohio.
Chambers, R., Fort Worth, Texas.
Crisler, J. A., Yazoo City, Miss.
Cooke, F. K., Wake Forest, N. C.
Caffey, H. B., Pittsburg, Kan.
Copenhaver, W. M., Bristol, Va.
Clegy, J. T., Siloam Springs, Ark.
Campbell, A. D., Cleveland.
Crook, J. L., Jackson, Tenn.
Clark, Emma D., Indianapolis.
Crouse, D. W., Waterloo, Iowa.

Craig, N. S., Jennings, La.
Cook, Geo. J., Indianapolis.
Cook, L. H., Bluffton, Ind.
De Brant, E., Canton, Ohio.
Dunsmoor, F. A., Memphis, Tenn.
Donaldson, J. B., Canonsburg, Pa.
Dallas, Alex., Bayonne, N. J.
De Grange, J. T., New Orleans.
Dickinson, W. L., Saginaw, Mich.
Davis, W. W., Ora, Miss.
Darrow, E. M., Fargo, N. D.
Dean, J. J., Waco, Texas.
Darrington, J., Yazoo City, Miss.
Delaup, Sidney P., New Orleans.
Dunning, L. H., Indianapolis.
Dick, A. J., Watertown, N. Y.
Davis, C. C., New Boston, Texas.
Dillon, J. R. M., Paducah, Ky.
Dodge, W. H., Hancock, Mich.
Dupree, W. J., Athens, Ala.
Danna, Jos. A., New Orleans.
Durham, Chas. O., Indianapolis.
Dicks, T. A., Broadlands, Ill.
Dunn, James H., Minneapolis.
Dibrell, M. S., Van Buren, Ark.
Dixon, A., Henderson, Ky.
Dean, Geo. R., Spartanburg, S. C.
Daugherty, C. A., So. Bend, Ind.
Dickson, J. A., Ashtabula, Ohio.
Davis, B. B., Omaha, Neb.
Earle, S. T., Jr., Baltimore.
Evans, Edw., La Crosse, Wis.
Earles, Wm. H., Milwaukee, Wis.
Eystes, G. L., Rock Island, Ill.
Evans, G. V. B., Dayton, Ohio.
Eckley, W. T., Chicago.
Earl, Robert O., St. Paul.
Eddy, W. J., Shelbyville, Ill.
Ellis, E. M., Crowley, La.
Evans, R., Fort Dodge, Iowa.
Eastman, J. R., Indianapolis.
Fletcher, M. H., Asheville, N. C.
Finley, T. R., St. Charles, Ky.
Fairchild, D. S., Clinton, Iowa.
Ferguson, Alex. Hugh, Chicago.
Funkhouser, Robert M., St. Louis.
Fithian, Joel W., Camden, N. J.
Fortner, B. F., Vinita, I. T.
Floyd, J. C. M., Steubenville, O.
Fox, G. R., Moreauville, La.
Frazier, J. M., Belton, Texas.
Fordyce, O., Guthrie Center, Iowa.
Foss, W. B., Ashby, Pa.
Francis, E. E., Memphis, Tenn.
Foley, John C., Waukegan, Ill.
Frick, W. J., Kansas City, Mo.
Fenner, E. D., New Orleans.
Franing, E. C., Galesburg, Ill.
Formento, Felix, New Orleans.
Frick, H. C., Evansville, Ind.
Fulton, Geo. E., Bluffton, Ind.
Grosskopf, E. C., Wauwatosa, Wis.
Gregory, Louis L., Chicago.
Gudden, B. C., Oshkosh, Wis.
Goodhue, Geo., Dayton, Ohio.
Graham, David W., Chicago.
Guthrie, J. R., Dubuque, Iowa.
Greene, W. S., Aberdeen, Miss.
Gremillion, C. J., Alexandria, La.
Greenewalt, G. L., Fort Wayne, Ind.
Green, G. W., Chicago.
Guiteras, Ramon, New York.
Grant, W. W., Denver.
Guthrie, G. W., Wilkesbarre, Pa.
Gafford, C. C., Wymore, Neb.
Gessner, H. B., New Orleans.
Gelpi, Paul J., New Orleans.
Gibbons, R. H., Scranton, Pa.
Gilmer, Thos. L., Chicago.
Gordon, S. C., Portland, Me.
Goelet, A. H., New York.
Graham, C., Rochester, Minn.
Gaines, G. W., Milliken's Bend, La.
Gardner, H. D., Scranton, Pa.
Goltman, M., Memphis, Tenn.
Goode, Rhett, Mobile, Ala.
Grant, H. H., Louisville, Ky.
Green, J. I., Leitchfield, Ky.
Green, Myron, Cincinnati.
Gumaer, A. G., Buffalo, N. Y.
Guthrie, James B., New Orleans.
Hughes, C. T., Gainesville, Texas.
Holden, W. B., Chicago.
Holder, E. M., Memphis, Tenn.
Huhner, E. J., New Orleans.
Holt, Joseph, New Orleans.
Hopkins, T. A., St. Louis.
Horsley, J. S., El Paso, Texas.
Howell, J. T., Wilkesbarre, Pa.
Hotchkiss, Lucius W., New York.
Huntington, T. W., San Francisco.
Helen, A. C., Beloit, Wis.
Hunt, R., Shreveport, La.
Hedges, T. M., Grinnell, Iowa.
Hening, D. M., Memphis, Tenn.
Hessert, William, Chicago.
Herron, R. G., Pittsburg, Pa.

Henderson, Wm. T., Mobile, Ala.
Hawley, D. C., Burlington, Vt.
Hatch, H., Quincy, Ill.
Harris, M. L., Chicago.
Hartung, Henry, Chicago.
Haire, R. D., Clinton, Mo.
Hakes, S. P., Tioga, Pa.
Hagaman, Will F., Norwood, La.
Henry, S. L., New Orleans.
Hawkins, Thos. H., Denver.
Hamilton, B. F., Emlenton, Pa.
Hall, D. A., Minneapolis.
Haines, W. D., Cincinnati.
Halderman, S. S., Portsmouth, Ohio.
Horton, C. L., New Orleans.
Hoefeld, Adolph O., New Orleans.
Hungate, J. B., Weeping Water, Neb.
Hackett, R. K., New Orleans.
Hamilton, W. D., Columbus, Ohio.
Hatcher, H. H., Dayton, Ohio.
Howard, W. N., Cape Girardeau, Mo.
Harlan, W. J., Bartlett, Texas.
Harrington, T. L., Milwaukee.
Hurley, C. E., Bentonville, Ark.
Hosteter, Calvin, Marcus, Iowa.
Hardon, Robert W., Chicago.
Hanna, Robert A., Peoria, Ill.
Holloway, E., Plaquemine, La.
Hadra, F., Fort St. Philip, La.
Harolson, J. J., Forest, Miss.
Hicks, L. O., Jackson, Ala.
Hollowbush, J. R., Rock Island, Ill.
Helm, W. B., Rockford, Ill.
Haecker, L. E., Hampton, Iowa.
Hudspeth, G. W., Little Rock, Ark.
Harris, T. A., Rosedale, Miss.
Hayden, John V., Salem, Ky.
Hayden, A. M., Evansville, Ind.
Hall, J. C., Anguilla, Miss.
House, A. F., Cleveland.
Hayes, D. I., Milwaukee, Wis.
Hayes, R. G. H., Bellefonte, Pa.
Irvine, Geo. W., Detroit.
Jacobson, J. H., Toledo, Ohio.
Jungblut, H. C., Tripoli, Iowa.
Johnson, C. M., Harvard, Ill.
Jones, R. E., Crystal Springs, Miss.
Jones, E. O., Murray, Utah.
Jacoby, A., New Orleans.
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Herdman, Wm. Jas., Ann Arbor, Mich.
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Langdon, F. W., Cincinnati.
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McBride, J. H., Pasadena, Cal.
McGregor, Robt., Saginaw, Mich.
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Sinkler, W., Philadelphia.
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Turner, B. F., Memphis, Tenn.
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Watson, D. L., New Orleans.
Wingate, W. O., Milwaukee.
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Blount, E. A., Dallas, Tex.
Bulkley, L. Duncan, New York.
Butler, Geo. E., Fall River, Mass.
Campbell, R. R., Chicago.
Chalaron, F. J., New Orleans.
Duncan, John H., St. Louis.
Dumesnil, A. A. O., St. Louis.
Dyer, Isadore, New Orleans.
Frederichs, E. D., New Orleans.
Fordyce, J. A., New York.
French, T. T., New Orleans.
Griffin, J. F., Hot Springs, Ark.
Henderson, R. G., Memphis, Tenn.
Hopkins, Ralph, New Orleans.
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McNeil, E. K., Jackson, Tenn.
Menage, H. E., New Orleans.
Minor, J. C., Hot Springs, Ark.
O'Keeffe, J. F., Mt. Clemens, Mich.
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Schamberg, J. F., Philadelphia.
Swarts, G. T., Providence, R. I.
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Cobb, C. M., Boston.
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Dean, L. W., Iowa City, Iowa.
DeRoaldes, A. D., New Orleans.
De Vilbliss, Allan, Toledo. O.
Dowling. Oscar, New Orleans.
Dupuy, Homer, New Orleans.
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Hammond, P., Boston.
Harrell, R. F., New Orleans.
Hill, J. Frank, Memphis, Tenn.
Joachim, O., New Orleans.
Judy, C. S., Miamisburg, Ohio.
King, Gordon, New Orleans.
Kuyk, D. A., Richmond, Va.
Landfield, C. J , New Orleans.
Lanington, H. J., Richmond, Va.
Lock, H. W., Lynn, Mass.
McKinney, Richmond, New York.
Marlsbarg, Geo. L., Toledo, Ohio.
Martindale, John Howard, Los Angeles, Cal.
Miles, R. E., Montgomery, Ala.
Moxley, N. R., Ft. Worth, Tex.
Murphy, W. E., Cincinnati.
O'Kelley, J. P., New Orleans.
Pake, S. Guy, W. Superior, Wis.
Page, Lafayette, Indianapolis.
Pennell, W. W., Fredericktown, O.
Pierce, N. H., Chicago.
Richards, Geo. L., Fall River, Mass.
Robinson, C. M., Dutch Mills, Ark.
Schambaugh, G. E., Newell, Iowa.
Scheppegrell, Wm., New Orleans.
Shurly, B. R., Detroit, Mich.
Snow, Sargent, Syracuse, N. Y.
Solly, S. E., Colorado Springs, Colo.
Stapler, Maury M., Macon, Ga.
Surghnor, G., Monroe, La.
Thigpen, C. A., Montgomery, Ala.
Woolen, Green V., Indianapolis.

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Eliot, G., New Haven, Conn.
Gwynn, John C., Century, Fla.
Holland, J. W., Philadelphia.
Jones, Philip M., San Francisco.
Larned, E. R., Pittsburg.
Leavell, Hugh, Louisville, Ky.
Moody, H. A., Mobile, Ala.
Murray, R. D., Key West, Fla.
News, G. A., Montgomery, Ala.
Osborne, O. T., New Haven, Conn.
Robinson, Wm. J., New York.
Sajous, C. Ed. M., Philadelphia.
Skinner, C. E., N. Haven, Conn.
Slack, H. R., La Grange, Ga.
Storck, J. A., New Orleans.
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Bell, Guido, Indianapolis.
Brown, Pl. W., Fish Hook, Ill.
Burring, W. L., Iowa City, Iowa.
Carter, W. S., Galveston, Tex.
Couret, Maurice, New Orleans.
Christian, Henry A., Boston.
Evans, W. A., Chicago.
Evans, N., Battle Creek, Mich.
Foss, John W., Phœnix, Ariz.
Gradwohl, R. B. H., St. Louis.
Hall, Winfield F., Chicago.
Hektoen, L., Chicago.
Houghton, E. M., Detroit.
LeCount, E. R., Chicago.
Leroy, Louis, Nashville, Tenn.
Lichty, Daniel, Rockford, Ill.
McFarland, Jos., Philadelphia.
Mandeville, W. R., New Orleans.
Metz, A. L., New Orleans.
Novy, F. E., Ann Arbor, Mich.
Ohlmacher, A. P., Gallipolis, Ohio.
Otis, F. J., Battle Creek, Mich.
Pinault, N. J., Pass Christian, Miss.
Pfaff, O. G., Indianapolis.
Pothier, O. L., New Orleans.
Smith, Claude. A., Atlanta, Ga.
Vaughan, V. C., Ann Arbor, Mich.
Ward, Henry B., Lincoln, Neb.
Welsh. W. H., Baltimore.
Whitehead, R. H., Chapel Hill, N. C.
Wynn, Frank B., Indianapolis.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Pruritus.

Robin and Dalche, according to "Amer. Med.," recommend the following outline of treatment of pruritus occurring in women at the time of menopause or as the result of nervous disorders arising from rheumatism, gout, diabetes, Bright's disease or gastric disturbances: Locally prolonged applications of a 1 to 1,000 bichlorid solution, or 10 per cent. solution of chloral hydrate or a 5 to 10 per cent. cocain solution. The following powder may be used locally:

℞.	Pulv. orthoform		
	Pulv. diiodoform		
	Pulv. talci, āā	ʒii	8

M. Ft. pulvis. Sig.: Apply locally.

The statement is made that the anesthesia from orthoform lasts longer than that from cocain. They mention an application of ichthyol in 10 per cent. aqueous solution or in the form of an ointment of 15 per cent. strength; a 5 per cent ointment of methyl salicylate is also of service. The following ointment may be used:

℞.	Menthol	gr. 3/4	05
	Guaiacol	gr. v-xv	30-1.
	Zinci oxidi	ʒiiss	10
	Vaselini	℥i	30

M. Ft. unguentum. Sig.: Apply locally. The following is recommended for internal administration.

℞.	Erythrol	gr. ss-iss	03-.09
	Calcii fluorid	gr. ss-iss	03-.09
	Calcined magnes	gr. ii	12

M. Ft. chartula No. i. Sig.: One such after each meal. The foregoing is recommended particularly in fermentation *from* butyric acid. If lactic acid fermentation is present the following should be substituted:

℞.	Ammon. fluoridi	gr. iss-xv	09-1.
	Aquæ	℥x	300

M. Sig.: One dessertspoonful after breakfast and supper.

H. Leo, in an abstract in "Indian Med. Record," is inclined to the belief that pruritus generalized over the body may be due to an over-alkaline condition of the blood and recommends the following treatment: Hydrochloric acid (50 per cent.) *in* ten-drop doses every two hours. At the end of a few days the acid may be changed to a 1.5 per cent. solution of sulphuric acid, giving a teaspoonful every two hours. The urine in most of the cases in which this was tried was strongly *alkaline in* reaction previous to commencing the treatment.

Tuttle recommends the following *combinations* in the treatment of pruritus ani:

℞.	Benzoini	ʒss	2	75
	Hydrarg. ammon.	gr. xii		
	Lanolini q. s. ad	℥ss	15	

M. Sig.: Apply night and morning after thoroughly *cleansing* the parts; or:

℞.	Ext. hamamelidis flu.	℥i	30
	Ext: ergotæ flu.	℥iss	45
	Ext. hydrastis flu.	ʒi	4
	Tinct. benzoini co.	ʒiss	6
	Olei lini cum acid. carbol (5 per cent.)	℥i	30

M. Sig.: Shake and apply locally night and morning.

Lactic Acid.

Lactic acid is of great service as an intestinal disinfectant, according to Hayem in the "Indian Med. Rec." Especially is it of service in the green diarrhea of children, combined as follows:

℞.	Acidi lactici	ʒss	2
	Syr. ideai (raspberry)	ʒv	20
	Aquæ	℥iii	90

M. Sig.: One teaspoonful every two hours.

It may be given in the form of a lemonade as follows:

℞.	Acidi lactici	ʒiiss	10
	Syrupi	℥vi	180
	Aquæ	℥xxiv	720

M. Sig.: One-half a wineglassful several times daily.

It is also recommended in the treatment of infantile prurigo, in eczema, and urticaria, given in two to ten drop doses twice a day before meals. It is of service in typhoid fever and cholera and in chronic dysentery, in which latter case it may be given in fifteen-drop doses every two hours, gradually diminishing the number of doses until three are given daily. It must be well diluted in a mucilaginous mixture.

Phosphorus in Phthisis.

F. S. Plicque, in "N. Y. Med. Jour.," states, in cases of fever in tuberculous subjects accompanied by gastric disturbances, that the following is of service as a beverage:

℞.	Acidi phosphorici dil.	m. xxx	2
	Aquæ	℥xxx	900
	Syrupi	℥iii	90

M. Sig.: One or two quarts of this combination may be taken daily.

The following combination is recommended by Dujardin-Beaumetz as an agreeable preparation and taken by children readily:

℞.	Sodii phos.	ʒiss	6
	Potass. phos.	gr. xlv	3
	Syr. aurantii cort.	℥ii	60
	Vini Banyuls	℥vii	210

M. Sig.: A wineglassful after each meal.

Creosote may be given temporarily, but patients grow thin under its use as a rule. Brissonet recommends the following emulsion:

℞.	Creosoti phos. or tannophos.	ʒvi	24
	Syr. aurantii flor.	℥ii	60
	Mucil. acaciæ	ʒiiss	10
	Aq. aurantii q. s. ad	℥iv	120

M. Sig.: One teaspoonful three times a day after meals; or:

℞.	Creosoti tannophos.	ʒiiss	10
	Olei morrhuæ	℥viii	240

M. Sig.: One tablespoonful three times a day. These preparations, according to the author, are contraindicated in hemoptysis.

The phosphite of soda should never be given by the mouth because of its irritant action. It has a good effect on the fever and infection, according to the writer, and can be given in the form of an enema as follows:

℞.	Tinct. opii (Sydenham)	m. x		65
	Creosoti phosphiti	m. xv-xxx	1-2	
	Yolk egg	No. i		
	Olei olivæ	℥i	30	
	Lactis	℥v	150	

M. Sig.: At one dose introduced by the bowel.

Diarrhea.

R. Le Clerg, in "Rev. Med. de Normandie," recommends the following in the treatment of persistent diarrhea of endemic origin:

℞.	Naphthalin	gr. iiss		15
	Pulv. sacchari			
	Quin. sulph., āā	gr. iss		09
	Morph. hydrochlor.	gr. 1/15		004
	Essentiæ bergamot., q. s.			

M. Ft. capsula No. i. Sig.: One such capsule three times a day.

The treatment must be accompanied by a proper regulation of the diet.

Incompetent Heart.

R. C. Curtin, in "Internat. Med. Mag.," recommends the following combination in the treatment of anasarca and general dropsy due to a right heart incompetency:

℞.	Sodii benzoatis	gr. ii		12
	Tinct. digitalis	m. iii		20
	Spts. etheris nitrosi	m. xx	1	30
	Diuretin	gr. iii		20
	Spts. chloroformi	m. xv	1	

M. Sig.: To be taken at one dose and repeated every two hours.

To improve the hepatic circulation in such conditions, calomel serves the purpose best; however, blue mass, podophyllin, sodium phosphate or other cholagogues may be substituted for it.

Hysteria and Neurasthenia.

The following combination, containing the glycerophosphates, is recommended by Thompson, in "Med Rev. of Reviews," in the treatment of hysteria and neurasthenia:

℞.	Sodii glycerophosphatis	℥ss	15
	Calcii glycerophosphatis	ʒii	8
	Acidi phosphorici dil.	ʒvi	24
	Aquæ cinnamomi q. s. ad	℥iv	120

M. Sig.: One teaspoonful three times a day after meals.

Substitutes for Quinin.

According to Solis-Cohen, in "Amer. Medicine," euquinin may be used as a substitute for quinin. The advantages claimed for it are that it is practically tasteless, it causes no tinnitus aurium, less prone to disturb the digestion and is not so irritating to the kidneys. The following formula is recommended:

℞.	Euquinin	ʒi	4
	Ferri lactatis	ʒii	8
	Sol. acidi arsenosi	ʒiss	6
	Tinct. lavendulæ co.	ʒiv	15
	Elix. curacoa q. s. ad	℥iv	120

M. Sig.: One teaspoonful four times a day.

Administering Quinin to Infants.

According to an abstract in "Gaz. des Hopitaux," Borde states that quinin can be made so palatable that children will take it, by preparing a mixture as follows: Mix gr. 15 (1.00) of quinin sulphate with drams 2 (8.00) of olive oil. According to the writer twenty-seven minims, as measured in a graduate, will contain one grain (.06) of quinin. This oily mixture is then floated on a tablespoonful of cold milk; this can be easily swallowed by a child without detecting the taste of the quinin. The oily mixture can be given alone, as it rolls down the tongue and the taste is scarcely detected by the infant.

Removal of Corns.

The following combinations are of service in the removal of corns, according to the "Pract. Drug.":

℞.	Acidi salicylici	ʒi	4
	Acidi lactici	ʒi	4
	Ceroti simplicis	℥i	30

M. Sig.: Apply locally night and morning; or:

℞.	Acidi salicylici	ʒi	4
	Resinæ	ʒii	8
	Adipis	℥ss	15
	Olei amyg. dulcis	ʒii	8

M. Ft. unguentum. Sig.: Apply locally night and morning.

Heat Stroke.

Andrew Duncan, in "Tropical Medicine," states, in the preventive treatment of heat stroke, that the head and spinal cord must be properly protected, the dress must be loose around the neck, chest and abdomen. As curative measures, the patient should be moved into the shade, if possible, his clothes loosened and cold water poured on the head and neck, and frequently repeated. Ammonia should also be applied to the nostrils, a turpentine enema administered and a large mustard poultice applied to the chest. The author states that ice should not be applied to the head when the pulse is feeble and the skin cold. Chloroform is indicated if convulsions occur, administering only a few whiffs. If pains subsequently persist in the head, blisters should be applied to the nape of the neck and quinin given internally.

He states that a solution of trinitrin (1 to 1,000) is of service, giving 20 drops of this solution every quarter of an hour until the symptoms have disappeared. Venesection is not advocated on account of the great mortality following its employment. Anyone who has suffered from heat stroke should not visit the tropics.

Medicolegal.

Duty as to Providing Medical Attendance for Child.—While granting the existence of a legal obligation on the part of a parent, or one standing in the place of a parent, to provide medical attendance for a minor child, it seems to the second appellate division of the Supreme Court of New York that the obligation does not necessarily import in every case the calling in of a physician. In the case before it, of People vs. Pierson, the intention, it thinks, was to charge that the crime consisted not merely of a failure to furnish medical attendance generally, but a failure to furnish medical attendance by a qualified doctor. If this view of the indictment was correct, the court holds that it failed to charge a criminal offense, in the absence of an allegation or statement of facts showing that the case [alleged to be one of catarrhal pneumonia] was one in which a regularly licensed and practicing physician and surgeon ought to have been called. The question as to whether such a state of facts existed must be determined by the standard of conduct of an ordinarily prudent person. In other words, it is thought, the medical attendance which the law requires the parent to provide for his child depends on the circumstances of the case; that in some instances ordinary household nursing by the members of the family may be sufficient; that, if the illness is of a graver character, it may be enough to call in the services of a trained nurse, and, when danger is apparent, then the obligation, under the law, goes so far as to require that a physician be summoned. But the guide to proper conduct must be ascertained by asking, "What would an ordinarily prudent person, solicitous for the welfare of his child, and anxious to promote the recovery of the patient, do under the given circumstances of the particular case?" The accused, the court says, was not tried on any such view of the law as this. The trial judge told the jury that before they could convict him they must find "that he knew that the child was ill, and deliberately and intentionally failed or refused to call in a physician, or to give to it such medicines as the science of the age would say would be proper that a child in its condition should have." It was true that this portion of the charge presented alternatives, and imported that the accused might comply with his obligations under the law by giving proper medicines, even if he did not call in a doctor; but the court thinks it was going too far to imply, as did the language quoted, that he would necessarily fail to discharge his duty if the medicines he gave were not such as the science of the age would say were proper. As already intimated, it thinks the standard which should be applied was the conduct of an ordinarily prudent person. Nothing is said in the prevailing opinion about faith healing or anything of that kind, and no intimation is given that it was known to the court that the accused believed in it or for that reason did not summon a physician. Presiding Justice Goodrich, however, in a lengthy dissenting opinion discusses what he terms the underlying question of whether or not a profession of religious belief in Divine or faith healing justified the accused in his refusal to obey the statutory law of the state. He maintains that the cases which he cites establish the principle that a person who wilfully and knowingly refuses to furnish necessary medical attendance to his minor child, when he knows it to be dangerously ill, disobeys Section 288 of the New York Penal Code (which provides that a person who wilfully omits to perform a duty by law imposed on him to furnish medical attendance to a minor is guilty of a misdemeanor), without regard to the question whether or not he acted in obedience to his religious convictions, and that the statute is not offensive to the article of the constitution as to liberty of conscience.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

May 9.

1 *Presidential Address, American Medical Association: Medical Education in the United States. Frank Billings.
2 *Oration in Medicine, American Medical Association: Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. Anders.
3 *Oration in Surgery, American Medical Association: Cancer and Immunity. (To be continued.) A. F. Jonas.
4 *Report of a Case of Pulsating Empyema Necessitatis, with Three Strongly Pulsating Tumors. Frederick P. Henry.
5 A Case of Epidural Abscess of Otitic Origin—Operation—Recovery. J. Guttman.
6 *Astigmatism Cured by Corneal Trauma. Percy Fridenberg.

1, 2, 3.—These articles appeared in The Journal, May 9.

4. **Pulsating Empyema.**—Besides the case here reported, Henry gives a general discussion of the subject and brief abstracts of a number of those reported in the literature.. From a careful study of many of the reported cases he concludes that the most important factors in the production of pulsating empyema are: Left-sided and large effusion; 2, relaxation of the thoracic wall from paresis of the intercostal muscles, and 3, a somewhat forcible heart beat. The presence of air in the pleural sac under great tension and the adhesion of the compressed lung to the pericardium are co-operating, but not essential causes.

6. **Astigmatism.**—Fridenberg first refers to Bull's case reported in the "New York Medical Journal" and abstracted in The Journal of February 29, ¶39, p. 541, and remarks that the tendency for the unexpected to happen is illustrated in his meeting, shortly after reading that account, with a case in which corneal astigmatism of low degree was neutralized by direct injury. He here reports the case. The mechanism was simple flattening of the corneal curve from the scar contraction. There was no actual section, but only a superficial, though extensive, incision of the cornea. Astigmatism was slight, and by peculiar chance just enough to neutralize the pre-existing inequality of curvature. He remarks that "the prophetic eye may see in the dim future the operation of graduated superficial keratotomy for astigmatism."

Philadelphia Medical Journal.

May 9.

7 *Presidential Address, American Medical Association. Frank Billings.
8 Report of a Case of Suturing the Omentum to the Abdominal Wall (Talma) for the Relief of Ascites Due to Cirrhosis of the Liver, Twenty-one Months After Operation. Thomas R. Neilson.
9 A Case of Cirrhosis of the Liver with Ascites; Operation Eight Weeks After First Occurrence of Ascites. Subsidence of Ascites Six Months After the Operation, and Non-Recurrence in Two Years. W. W. Keen and H. M. Fisher.
10 *Novelties in the Physical Treatment of Skin Diseases. L. Freund.
11 *Importance of Repair of Small Cervical Lacerations. James H. Burtenshaw.
12 *Toxic Amblyopia, from Wood Alcohol. J. W. Sherer.
13 *A Note on Traumatic Syringomyelia, with Report of a Case Presenting Sensory Disturbances Affecting One Limb, and Trophic Changes of the Subcutaneous Tissue of the Entire Limb. Alfred Gordon.

7.—This article appeared in The Journal, May 9.

10. **The X-Ray.**—Freund describes two new instruments for testing the penetrability and length of spark of the *x*-ray, the first consisting of a transparent scale of layers of aluminum and the second a scale "spintometer" arranged parallel to the tube and measuring the spark length. Still another apparatus is the Holzknecht chromoradiometer, based on the principle of the absorption of the *x*-rays by fluorescent salts, which produces reflections of a certain tint, which are compared with a standard color scale. (Illustrated in The Journal of Oct. 25, 1902, p. 1079.) Freund considers that the correct estimation of dosage and intensity and quality of the rays is not such an advantage in the treatment as might appear. We should study the individual reaction as well as action in these cases. There is a possible difference in individuals and the way they react to the rays. He has experimented with the

action of the ultra-violet rays and their bactericidal action and finds very little effect, but his investigations have shown that the heat rays exert a favorable influence in some skin affections.

11. **Cervical Lacerations.**—Burtenshaw calls attention to possible reflex effects of minute cervical lacerations which may be overlooked, and reports cases where they were hardly observable and yet operation caused almost immediate relief of symptoms. It does not follow that every tear of the cervix requires a surgical operation, but he thinks due significance is not given to the smaller ones, which in many cases are the unrecognized causes of not only local morbid conditions but of systemic ones as well.

12. **Wood Alcohol Blindness.**—Sherer reports a case and discusses the condition, pointing out the dangers of wood alcohol, and concludes that there is no remedy for this condition. He adds, in conclusion, a notice of Marlowe's researches on the pathology of the disturbance, which appears to be a primary destruction of the nerve elements.

13. **Traumatic Syringomyelia.**—In the case here reported by Gordon the symptoms were localized and unilateral, though in other respects most typical of syringomyelia.

Boston Medical and Surgical Journal.

May 7.

14 *President's Address, American Medical Association. Frank Billings.
15 *Oration in Surgery, American Medical Association: Cancer and Immunity. A. F. Jonas.
16 *Brachial Paralysis, Post-Narcotic. F. J. Cotton and S. W. Allen.
17 Pyronin-methyl Green: A Brilliant Double Stain for Cells and Bacteria. William F. Whitney.
18 X-Light in Anthropometrical Signalment. William Rollins.

14, 15.—These articles appeared in The Journal, May 9.

16. **Post-Narcotic Brachial Paralysis.**—After reporting four cases and analyzing the symptoms, Cotton and Allen emphasize particularly the following points:

> Paralysis of part or all the muscles supplied by the brachial plexus with some sensory involvement is not very uncommon after narcosis, though rarely mentioned. Its cause is not toxic but mechanical. It occurs only when the arms are long held above the head or lie in abduction—never if they lie flexed on the chest. The mechanism is a pressure on the nerve roots, probably between the clavicle and the muscles over the transverse processes of the cervical vertebræ, or from stretching over the head of the humerus in abduction.
>
> The trouble is essentially functional without known lesions. The lost function returns in part very early. Total recovery is often long delayed, but apparently is to be counted on. The possibility of the accident should be impressed on students, on house officers and on all of us. In view of this risk the arms of a patient under ether should always, where possible, be flexed with the hands on the chest. If other positions are unavoidable they should not be continued long without change.

Medical News, New York.

May 9.

19 *Oration in Surgery, American Medical Association: Cancer and Immunity. A. F. Jonas.
20 *The Resemblances of Malignant Endocarditis to Typhoid and Paratyphoid Infections. Henry L. Elsner.
21 *Nephrorrhaphy in Intermittent Hydronephrosis. J. Wesley Bovée.
22 Extraperitoneal Ligation of External Iliac for Femoral Aneurism. Wm. B. Crawford.
23 Intussusception: Report of a Case Reduced by Operation. George T. Vaughan.

19.—This article appeared in The Journal, May 9.

20. **Malignant Endocarditis.**—Elsner remarks that two facts especially impressed him in regard to the relations of malignant endocarditis to typhoid and paratyphoid infections: 1. The typhoid type of malignant endocarditis has rarely been diagnosed during life, and the detection of the focus from which the infection springs has presented the greatest difficulty. 2. In some cases the primary infection may be unnoticed or be so slight as to appear insignificant. He reports cases illustrating this point. Endocarditis of pneumonia is rather rare and it has special anatomical peculiarities. The right side of the heart is attacked more frequently and the aortic valve more often than the mitral. Endocarditis complicating pneumonia is sudden in onset and rapid in its course. He insists on the importance of the occurrence of chills as indicating secondary infection if the case is a primary typhoid, and also the importance of frequent examinations of the blood, not depending on the blood count alone. Repeated negative results of blood cultures do not exclude the presence of ulcerative endocarditis.

21. **Intermittent Hydronephrosis.**—The connection of intermittent hydronephrosis with mobile kidney is emphasized by Bovée, who reports two cases relieved by nephrorrhaphy, fixing the kidney in its normal position, thus straightening out the urethra and preventing temporary angulation which caused intermittent obstruction.

Medical Record, New York.

May 9.

24 *Presidential Address, American Medical Association: Medical Education in the United States. Frank Billings.
25 *Oration in Medicine, American Medical Association: Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. Anders.
26 *Oration in Surgery, American Medical Association: Cancer and Immunity. A. F. Jonas.

American Medicine, Philadelphia.

May 9.

27 *Presidential Address, American Medical Association: Medical Education in the United States. Frank Billings.
28 *Oration in Medicine, American Medical Association: Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. Anders.
29 *Oration in Surgery, American Medical Association: Cancer and Immunity. A. F. Jonas.

24 to 29.—All these articles appeared in The Journal, May 9.

Cincinnati Lancet-Clinic.

May 9.

30 *Heredity, with Especial Reference to Certain Eye Affections. Francis Dowling.
31 The Country Doctor—My First Case of Labor in the Country. John G. Albers.
32 Surgery of Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

30. **Heredity.**—Dowling discusses heredity in general, especially in its relation to eye disorders. He finds pathologic hereditary transmission particularly marked in cases of certain eye affections. In many instances the morbid processes are latent and require some external injury to serve as an exciting cause for their development. To this class belong myopia, cataract, glaucoma, etc., though some of these may be present at birth. As a rule the hereditary affections are probably the result of fetal disease. Another class of inherited eye diseases belong to those maladies which the parents transmit to their offspring in the shape of a dyscrasia, such as the tuberculous, the scrofulous, the syphilitic, etc., which lay the foundation for various eye affections. In this connection, also, he mentions consanguinity and the frequency of retinitis pigmentosa in these cases, besides myopia, color blindness and ordinary blindness. He especially calls attention to the part the color of the eye seems to play. Dark eyes are seemingly the most subject to these hereditary disorders.

St. Louis Medical Review.

May 2.

33 Address at the Commencement Exercises of the Marion Sims-Beaumont College of Medicine. Thomas H. Carter.
34 *A Certain and Permanent Cure of Painful Tic—Tic Douloureux. J. K. Bauduy.

34. **Tic Douloureux.**—The Dana method of administering progressively increasing and massive doses of strychnia is endorsed in neuralgia by Bauduy. He has tried this, using an auxiliary nerve food with great success. While he admits that strychnia needs to be used with caution and the effects watched, he has employed it by the mouth, gradually increasing the dose until 1/10 of a grain three times a day was used for some time in connection with the anode galvanic treatment to the nerve, and with arsenic and iodid of potassium. He is convinced that it will accomplish radical cures.

Brooklyn Medical Journal.

May.

35 *Congenital Hypertrophic Stenosis of the Pylorus. Frank Whitfield Shaw.
36 *Illuminating Gas Poisoning. Paul M. Pilcher.
37 *Causes and Relief of the Summer Mortality Among Brooklyn Children. C. LeGrand Kerr.
38 The Etiology of Insanity. R. C. F. Combes.

35. **Congenital Hypertrophic Stenosis of the Pylorus.**—Shaw gives the history of the recognition of this condition and describes its symptoms. It is usually fatal in the ordinary type in about ten to fourteen weeks. He recognizes, however, two other varieties of the same pathologic condition, one of

which is the so-called congenital spasm of the pylorus, first suggested by Thompson of Edinburgh and assigned by him as the primary cause or etiologic factor of pyloric hypertrophy. In these cases recovery usually occurs in a few days without operation. In the second type the stenosis appears at four or five years and upwards and he reports cases which he thinks may be classed under this head—an incomplete stenosis with only occasional spasm, but complete closure coming on gradually. He also reports two cases of partial pyloric hypertrophy in which spasm appeared to predominate. Excepting in such cases as the last two reported, the only successful treatment is operative. In nearly all any other measure is not lasting. In conclusion he says that cases of sudden and persistent vomiting occurring soon after birth without any ascribable cause, resisting all treatment, should be looked on with suspicion and receive at least a provisional diagnosis of congenital pyloric stenosis. Similarly, disease of the pylorus ought to be suspected in case of cyclic vomiting extending over several years.

36. Illuminating Gas Poisoning.—Pilcher has had a number of cases of this condition under his care and reports several in detail. He holds that the toxic effects of illuminating gas are primarily due to chemical changes produced in the constituent elements of the blood, this being a substitution of carbon monoxid hemoglobin for the oxyhemoglobin, so diminishing the supply of oxygen to the tissues. The direct cause of most of the symptoms is diminished percentage of oxygen in the arterial blood supplying the central nervous system. This would indicate a treatment by the administration of pure oxygen in order to force it into simple solution in the blood and so reinforce the remaining oxyhemoglobin. For the further purpose of supporting the circulation, diluting the poison, assisting its elimination and its possible influences in breaking up the chemical combination of the CO with the hemoglobin, a copious infusion of normal salt solution should be administered. In severe cases direct blood transfusion should be practiced. To control the tendency to acute cardiac dilatation, a free use of cardiac stimulants should be early resorted to. Edema of the lungs is the chief of the secondary sources of danger and must be constantly watched for and every possible measure taken to guard against it.

37. Infant Mortality.—Kerr reviews the statistics of infant mortality in Brooklyn and calls attention to the defects which increase it. He thinks the chief needs are a rigid supervision of all cases of pertussis, a recognition by the public of the dangers of neglected cases of measles, cleaner streets, more care in the preparation of the infant's food and, most of all, a good, wholesome, clean milk supply on which the physician can absolutely depend for his modifications.

American Journal of the Medical Sciences, Philadelphia.

May.

39 Anatomical Study of a Short-Limbed Dwarf, with Special Reference to Osteogenesis Imperfecta and Chondrodystrophia Fetalis. Ludvig Hektoen.
40 A New Method of Correcting Flexion Deformity at the Knee-Joint. Royal Whitman.
41 *Pronation of the Foot. E. J. Huhner.
42 A Case of Aneurism of the Transverse Portion of the Aortic Arch in a Girl of Nine Years, with Table of Reported Cases Under Twenty Years of Age. Theodore LeBoutillier.
43 *Some Notes on the Opium Habit and Its Treatment. Smith E. Jelliffe.
44 Volvulus of the Small Intestine—Its Relations to Hernia, Torsion of the Entire Mesentery; Report and Résumé of Cases. George T. Vaughan.
45 *Intestinal Perforation During the Course of Typhoid Fever, and Its Surgical Aspects. C. E. Briggs.
46 Some Phases of Gallstone Disease, with Special Reference to Diagnosis and Treatment. D. D. Stewart.
47 Peritonitis of the Duodenal Region. James P. Warbasse.
48 *A Contribution to the Study of the Human Blood Pressure in Some Pathological Conditions. George W. Norris.

41. Pronation of the Foot.—Huhner describes this condition, which is not flat foot, but has been called weakened foot or weak ankle. The head of the astragalus rotates inward and backward, its body forward and outward, and the internal malleolus moves backward and the external forward. The front part of the foot is abducted as a whole, and the calcaneum rotates toward a valgus position. In this condition care should be taken as regards footwear. Sometimes raising the inner side of the shoe will be all that is needed. Tip-toe exercises should be given to strengthen the adductors and external rotators of the foot. For mechanical support he advises an apparatus devised by Lovett and Cotton. He finds this condition very frequent, about 64 per cent. of males and nearly 80 per cent. of females are thus affected.

43. The Opium Habit.—The opium habit is considered by Jelliffe as probably very frequent and in its psychology having a parallelism with the alcohol habit. The idea that it is incurable should never be accepted by the medical man. There are great variations in the cases. Some patients can voluntarily give up the habit while others do not care to. The cardinal principles on which a rational therapy are to be founded are, he thinks, the substitution of different ideas by suggestion and of different sensations by other drugs. His experience is that hyperbromidization according to Macleod's method is best. His experience with the hyoscin treatment of Dr. Lott is rather contradictory. In one or two cases it has given him an unpleasant shock from dangerous collapse during its administration. Heroin, he thinks, may be a useful drug in these conditions in many cases, though he does not consider it reliably efficient. Several cases are reported.

45. Typhoid Perforations.—The frequency of this condition is estimated by Briggs as very great. With a death rate of 10 per cent. there would be 50,000 mortality per annum from typhoid in the United States, and perforation causes about one-third of these deaths, giving, therefore, a death rate of something over 16,000 or 17,000 cases of typhoid perforation per annum. The usefulness of operation has become established of late years and operative technic is probably nearly perfected; improvement will be along the line of early and accurate diagnosis. The mortality following operation is not, he thinks, altogether due to general peritonitis. It is important to distinguish between the symptoms and signs of the condition. Of the symptoms, abdominal pain is the most important when present. Spreading sensitiveness is a little more to be relied on than spreading pain. The sensations associated with shock are of considerable importance, but their absence may be disregarded in making the diagnosis. Of the physical signs, muscular resistance is probably the most important. Distension and tympany are not of any consequence as regards perforation *per se.* The presence of *abdominal gas outside the intestine,* if it can be determined with absolute certainty, is practically a proof of the perforation. Nausea and vomiting are so rare that they are of little aid. Altered respiration is a sign of some consequence and is probably to be interpreted as is muscular resistance, namely, a means of protecting the abdomen. Alteration in temperature may be of some value, but its absence is not conclusive of anything. The pulse is of great importance; it is, of course, an evidence of systemic shock accompanying perforation, but otherwise deserves special attention. There is almost invariably a rise of perhaps twenty beats or more and the occurrence is rather sudden, the quality altered, the tension reduced and the pulse rendered readily compressible. Any sudden marked alteration in the rate and quality is an indication of importance. We know too little as yet of the altered blood conditions. If the diagnosis of hemorrhage is incorrectly made, and, instead of this, perforation has occurred, the desirable opportunity for operation is lost while waiting for demonstration of hemorrhage through the bowel passages. The red count and hemoglobin percentage may, therefore, be of some use. Systemic shock is a matter of very great importance. He sums up the signs and symptoms on which we must mainly rely as pain, sensitiveness, muscular resistance, altered respiration, alteration in rate and quality of the pulse and evidences of systemic shock. The differential diagnosis is discussed at some length. As for treatment, operation is necessary, the sooner the better. Attention must be paid to anesthesia, especially as to the reduction of systemic shock. In some apathetic and stolid patients local anesthesia may be best. Briggs doubts, however, whether the extensive and careful abdominal irrigation usually required can be as well accomplished without general anesthesia. Careful, not too hurried, operation is advised and drainage. The question of exploratory incision is, he considers, of the greatest importance. Where perforation is suspected with a not absolutely certain diagnosis, exploration affords the only hope of avoiding a possible catastrophe. The improvement in recovery rate after operation, though as yet not high, is certainly encouraging. In conclusion, he insists on the great value of complete postmortem examinations in all these cases as being more instructive than reports of recovered cases. A complete examination, however, does not mean a complete autopsy.

48. **Blood Pressure.**—Norris discusses the blood pressure in various conditions of disease, such as nephritis, saturnism, heart disorders, cardiac lesions, etc., quoting extensively from the literature. He says:

> In the present state of our knowledge the height of the blood pressure can not be said to be a useful index in regard to the potency of the systemic circulation, nor is it a criterion of sufficient constancy to be used as a basis for prognosis. The pressure index may, in some instances, be regarded as a relative indication for treatment. What, as a rule, we require to know is not so much the actual height of the tension as the amount and character of its fluctuation. We have seen that a fair state of nutrition may be carried on in the convalescence from typhoid fever with a tension of 85 mm. and in arteriosclerosis at 180 mm.

Journal of the Michigan State Medical Society, Detroit.

May.

49 The Technic of Symphysiotomy, with Report of a Case. Frank A. Grawn.
50 Syphilis, Its Management and Control. Albert E. Carrier.
51 *A Preliminary Report of Some Observations on the Blood of Pregnancy and the Puerperium. George R. Pray.
52 Non-Ethical Ethics. D. L. Walmsley.
53 *The Advantages and Limitations of the Rest Cure. George F. Butler.
54 The Non-Surgical Treatment of Epithelial Disease. J. J. Moore.

51. **The Blood in Pregnancy and the Puerperium.**—From a study of the literature and personal examinations, Pray concludes that while blood generation fails to keep pace with the increased vascular area, a serous dilution of the blood takes place. Ordinarily this is not serious and can be overcome by proper hygiene, fresh air, attention to exercise and food and avoidance of constipation. If the vitality is overtaxed, the increased demand of nutrition may call for iron or other tonic treatment. The regeneration of the blood is partly effected by the lessening of the vascular area after labor and subsequent transudation of fluids into the tissues. The leucocytosis is due to increased action of the enlarged lymph glands of the pelvis, and in part to the increased metabolism which causes a somewhat toxic action. The lochia aid in its decrease. The persistence is accounted for by the fact that the involution of the hypertrophied pelvic organs and breast is accomplished in a great measure by the leucocytes. The blood after cesarean section shows the same general conditions as after normal labors.

53. **The Rest Cure.**—Butler's paper is largely a criticism of the methods of the Weir-Mitchell rest cure, which he thinks has to some extent gotten into the hands of those who use it in an unethical way. He also thinks that Mitchell has overestimated the value of overfeeding and underestimated the importance of suggestion. The Playfair school as a badly modified offshoot of the Mitchell school has the same bias; mere alteration of environment is not change. There is danger from the nurses, especially if trained in general hospitals. They are likely to examine for symptoms and suggest them to the patient, thus increasing the introspective tendency. They are also fond of impressing the patient with their importance by narrations of medical and surgical cases which suggest uncomfortable imaginations and increase the nosophobia. The patient needs reassurance rather than conviction as to his case. Intellectual cultivation through reading by the nurse, and cheerful yet logical conversation by the physician on the source and character of the patient's fears are excellent means of combating the distressing mental conditions of rest cure patients. Another error prominent in ordinary rest cures is that in dietetics. The patient, not the disease label, must be considered. While milk is valuable, it will cause gastrointestinal catarrh in many cases and buttermilk might often take its place, but is forbidden by many physicians. The necessity for hot and cold baths is mentioned, but the patient's disinclination for them is generally humored. Massage, which simply supplies the place of exercise, is too often given under the pretense of some occult, magnetic, osteopathic or hypnotic influence. Under these guises it is positively harmful and a mental and physical poison. The masseur needs to be kept in his own place and is too apt, like the nurse, to prescribe, diagnose and give clinical lectures. Some masseurs, Butler says, are perverts, hence proper selection and strict supervision of masseurs and massage is imperatively necessary. Electricity has the same ill effects unless it is explained to the patient. It is simply a delicate localized form of exercise. The medicinal treatment in the rest cure should be minimal and directed only to symptomatic indications which can not be overcome by the proper bowel, bladder and uterine hygiene, diet, massage and electricity. There is too much use of the bromids, for which Mitchell is partially responsible. The bromid, chloral and other drug habits are sometimes created through rest cures, and this possibility receives too little attention. Another necessity in the rest cure is that of bringing about periodic functions in the gastro-intestinal canal. It should be looked on as a method of education of the system, not merely as a therapeutic measure.

The Laryngoscope, St. Louis.

April.

55 *Local Anesthesia in Surgery of the Upper Air Passages. J. A. Bodine.
56 *Remarks on General Anesthesia in Operations Involving the Upper Air Passages. Thomas L. Bennett.
57 *Membranous and Ulcerative Pharyngitis of Streptococcic Origin.* S. L. Ledbetter.
58 *Acute Laryngitis of Singers; Its Abortive Treatment. H. Holbrook Curtis.
59 Report of a Case of Paralysis of Both Internal Thyro-arytenoid Muscles. W. G. B. Harland.
60 *The Treatment of Acute Mastoiditis and Its Influence upon Audition. James Francis McCaw.
61 *The Question of Nasal Treatment for the Cure of Diseases of the Ear. Alex. W. Stirling.
62 Septal Fallacies. Beaman Douglass.

55. **Local Anesthesia in Surgery of the Upper Air Passages.**—Bodine insists on the importance of regarding the psychic element in local anesthesia of the upper air passages. He describes the methods of using cocain and claims that many symptoms thought to be due to cocain idiosyncrasy are only manifestations of nervous fright. In some cases, of course, application to the mucous membrane is alone possible, but it is not an entirely satisfactory method. He notices in conclusion the Crile method of "blocking" the nerve, thus cutting off the reflexes from and anesthetizing its territory.

56. **General Anesthesia in Operations on the Upper-Air Passages.**—The difficulties of operating in the upper-air passages on account of the necessity of having free respiration at the same time, etc., are noticed by Bennett, who then discusses the different anesthetics employed. He thinks that while nitrous oxid has the best record for safety, that if it were used for long operations this would not be the case. The greatest contraindication to its use is the mechanical obstruction to respiration. For prolonged operations ether is the safest and should be preceded by nitrous oxid when possible. Chloroform is the most dangerous. Its increased mortality, he thinks, is due almost entirely to the following factors: 1. Unusual position, of which sitting is the most dangerous; 2, interference with respiration; 3, sudden hemorrhage, usual in many nose and throat operations. By the avoidance as far as possible of these dangerous factors he thinks that chloroform can be employed with reasonable safety. It should be preceded, if possible, by ether or gas or gas and ether. The ether or gas and ether is probably the best for prolonged operations in the removal of tonsils or adenoids. Some children are not capable of being sufficiently long anesthetized by the nitrous oxid alone. The use of ether stimulates the patient and a slow recovery of consciousness is of advantage in sparing the patient the sights and sensations which must accompany the first moments after the removal of tonsils or adenoids. Ether increases the tendency to immediate hemorrhage. If chloroform is used it should be administered sparingly, the head kept

low and respiration interfered with as little as possible. Bennett prefers full anesthesia in these cases. Protection of the lower-air passages from entrance of foreign matter is one of the most important matters in operating on the upper-air passages. In ordinary cases without tracheotomy danger from this source is prevented by frequent swabbing of the throat during the operation, by the placing of pads to receive matter passing toward the lungs, by the position of the patient and by a degree of narcosis in which the patient protects himself by coughing and swallowing. In conclusion, he remarks in regard to a method of giving anesthesia devised by Crile, completely protecting the lower-air passages by introducing heavy walled rubber tubes through the nostrils to a point in the pharynx opposite the top of the larynx, respiration taking place through the tubes and the anesthetic applied in this manner, while the mouth is kept opened, the tongue pulled well forward and the space thus formed at the back of the pharynx is packed tightly with gauze. In the cases where he has used this method of protection of the lower-air passages it has been absolute, the respiration has been normal and the narcosis perfect.

58. **Acute Laryngitis of Singers.**—After first noticing traumatic laryngitis, Curtis remarks that the most common cases are of nervous origin due to mal-coördination of the intrinsic muscles from perverted inhibitory function, or paresis of the motor nerves, and nearly always accompanied with congestion. We must observe the shape of the glottic chink. A unilateral adductor paralysis should at once lead us to a guarded prognosis. We should watch in deep respiration to see if paralysis is complete. Bilateral adductor paralysis is generally functional in origin, due to hysteria or reflex causes, but in almost all the laryngeal inflammations we notice some paresis of the lateral arytenoid muscles. In abductor paresis we have an affection of the crico-arytenoid postici muscles frequently due to pressure on the recurrent nerves from enlarged bronchial glands, or disturbance of the vagus. This is often produced by a simple cold. But the most common of all the pareses accompanying a laryngitis is paresis of the thyro-arytenoid internus and externus muscles. The elliptical chink of the glottis caused by a paresis of the internal thyro-arytenoid is familiar. Less frequent are those where the cords are deflected posteriorly to the right or left side or there is a double ellipse caused by combined paresis of the arytenoid and the external thyro-arytenoid muscles. The patient almost always presents himself trying to talk in a loud tone with a very husky voice. The first thing in treatment is to insist on absolute silence, or a tone whispered on the lips with no laryngeal quality in the voice. This must be enjoined, until the sound written "humph" may be made without effort through the nose, the mouth being closed. Then he commences vowel exercises, using words like ming, mong, ding, dong, maw. mow, etc., as an adjunct to treatment. The instant innervation is re-established, muscle exercises to overcome the slight infiltration may be employed. From the first he gives strychnia internally and applies static or faradic electricity along the course of the recurrent laryngeal nerves. Adrenalin chlorid solution sprayed into the larynx before tone exercise is commenced is very useful. He also alternates the exercises with massage each side of the trachea and thyroid as well as under the ramus and angle of the jaw. A cold pack is then applied to the throat and the pyriform sinuses are swabbed with tincture of iodin and glycerin in equal parts, to stimulate the nerves and produce a counter-irritation without the vocal larynx. Nutrition and elimination must be looked after. The respired air must be cold and pure. Later, after the laryngitis has been relieved, he would use a spray of 1-1,000 solution of adrenalin in four volumes of water during a performance, alternated with an inhalation of menthol in albolene (5 to 10 grs. to the ounce) or an inhalation of iodoform in ether. He has saved many performances by using this method and considers it the simplest and best.

60. **Acute Mastoiditis.**—McCaw has found no reference in the literature to the influence of acute mastoiditis on audition, and gives his views on the subject. His conclusions are offered as follows:

> 1. Great reliance can be placed on abortive measures in the hemorrhagic variety of acute tympano-mastoiditis following influenza, with a reasonably certain prognosis of normal hearing. In no other form of the disease can this be done. 2. The period of the disease at which appropriate treatment is applied influences the ultimate functional result. 3. In all cases requiring operation the earlier we attack them surgically, the greater will be the amount of hearing preserved. 4. The dry method of post-operative treatment seems to influence the function of audition, but to a less extent than early surgical interference.

61. **Ear Diseases.**—Stirling finds that nasal treatment is unprofitable to the patient in case of pure sclerosis, and that in aural catarrh it should be limited to removal of the conditions which may be interfering with recovery of the mucous membrane lying between the nose and tympanum. A nasal operation for the sake of the ear should be one that is advisable for the sake of the nose. In a few cases of slight adenoids situated around the orifice of the eustachian tubes it may be advisable to remove them, even when there may be few or no symptoms referable to the nasopharynx.

New York State Journal of Medicine, New York.

May.

SYMPOSIUM ON PNEUMONIA.

63 Etiology, Its Infectiousness, and Methods of Elucidating the Pneumonia Diplococcus. C. D. Kline.
64 Diagnosis in Pneumonia—General and Differential. J. H. Crosby.
65 Complications of Pneumonia. S. W. S. Toms.
66 Pneumonia Complications with Surgical Operations. G. A. Leitner.
67 Treatment of Pneumonia. G. F. Blauvelt.
68 *Ergot in Pneumonia. Alfred T. Livingston.
69 *The Kidney of Pregnancy. John O. Polak.
70 Albuminuric Retinitis of Pregnancy. James W. Ingalls.
71 *The Pathogenesis and Etiology of Puerperal Eclampsia—A Plea for the More Systematic Observation of Patients During Pregnancy. Frederick P. Hammond.
72 *Treatment in Gynecology from a Medical Standpoint. Mary Gage-Day.
73 *The Roentgen Ray in Obstetrics. Joseph B. Cook.

68. **Pneumonia.**—Livingston recommends the use of ergot in pneumonia on the ground that the principal underlying condition in the disease is dilated blood vessels and that ergot is the only general equalizer of the circulation. He claims that if called sufficiently early, while the disease is still a matter of congestion, all that is needed is a hypodermic syringe and a solution of ergot, and that the free use of the drug in the first stage will abort, cut short or markedly limit the extent of the second stage and also guard against complications of the disease. He discussed the subject and the mode of administration in THE JOURNAL, March 21, 1903, p. 774.

69.—This article has appeared elsewhere. See THE JOURNAL of May 9, ¶32, p. 1323.

71.—See abstract in THE JOURNAL, xxxix, p. 1204.

72.—Ibid.

73. **X-Rays in Obstetrics.**—Cooke reviews the possible use of the Roentgen ray in obstetric cases and deduces the following conclusions:

> The value of the *x*-ray for studying the dimensions of the pelvis is, for practical purposes, lost, because of the difficulties attendant on its use, and at best it is probably not so reliable as mensuration and palpation performed by the skilled observer. In the study of the gravid uterus the results are wholly unsatisfactory when compared with those obtained by the ordinary recognized methods of examination. As a means of diagnosing certain forms of ectopic gestation fairly reliable presumptive evidence may possibly be secured, but it would need the corroboration of more positive methods before it could be definitely accepted. Advanced pseudocyesis could doubtless be detected by the use of the *x*-rays, but the administration of a little chloroform would accomplish the same result in a far simpler manner. In suspected twin pregnancies, where diagnosis can not be made with certainty, the *x*-ray may have a distinct diagnostic value, and would doubtless be of assistance in these rare conditions.

Indiana Medical Journal, Indianapolis.

May.

74 Address, American Laryngological, Rhinological and Otological Society. L. C. Cline.
75 Vaccination Record of 138 Students of the Indiana Medical College. A. W. Brayton and Charles E. Ferguson.
76 Education by Occupations. William L. Bryan.
77 *The Intravenous Injection of Formaldehyd as a Cure for Septicemia and Its Use in Smallpox. Nelson D. Brayton.

77. **Formaldehyd in Septicemia.**—Brayton has investigated the use of formaldehyd in smallpox and notices its advantages in variolous septicemia. He has collected the history of the use of formalin infusions in five different cases, all fatal, and does not believe that any germicide can be introduced into

the vascular system in quantities sufficient to destroy the germs without being destructive to the delicate tissues with which it comes in contact, and, inasmuch as effective dilution would necessarily be fatal to the patient, its use is contraindicated. For the present we should confine ourselves in the severer forms of sepsis to the use of normal salt solutions or those more nearly conforming to the constituents of the blood plasma. The response to the infusions in the cases described was quick and remarkable, illustrating the necessity for the addition of fluids to the blood in pustular smallpox.

Annals of Gynecology and Pediatry, Boston.

May.

78 *The Scope of the Vaginal Incision. Andrew F. Currier.
79 *Cancer of the Cervix; Treatment by X-Ray. Thomas P. Scully.
80 *Hyperplasia and Hypertrophy of the Uterus. Charles G. Geiger.

78. **Vaginal Incision.**—The usefulness of anterior or posterior vaginal incision is discussed by Currier and the posterior incision with its modifications has, he thinks, the greatest sphere of usefulness. Why section of the peritoneum by way of the vagina should make less impression on the vitality of the individual than that made through the abdominal wall has never been explained, but it is recognized as a fact. Hemorrhage after vaginal operation is more easily controlled; there is less danger and the elimination of a possible hernia later is of some importance. The anterior vaginal incision may be made for certain diseases and dislocations of the uterus, for certain diseases of the tubes and ovaries and occasionally for the treatment of inflammatory pelvic exudates. The most frequent indication is retroflexion and it will often be found useful in cases where tuberculosis or serious heart disease or disease of the liver or kidneys renders pregnancy undesirable, and in which the fallopian tubes may be ligated to prevent it. Myomata of the anterior wall of the uterus can be removed in this way. It also will occasionally be a valuable aid in the diagnosis of disease conditions in the anterior segment of the pelvis. The posterior incision is indicated under the following heads: 1. Diagnosis; 2, pelvic exudates; 3, tumors of the appendages; 4, pediculated myomata; 5, intraligamentous cysts; 6, displacements of the uterus and appendages; 7, accumulations of blood in the pelvic or abdominal cavity, not encapsulated or isolated; 8, some of the exigencies of parturition and the puerperal state. This enumeration shows it has a very broad field of usefulness. Details of its application are given.

79. **Cancer of the Cervix Treated by the X-Rays.**—Three cases are reported by Scully, all of which were greatly relieved and apparently well on towards recovery. He has two other cases still under treatment.

80.—See abstract in The Journal of January 17, p. 189.

Buffalo Medical Journal.

May.

81 Popular Medical Education; Its Aid in Limiting the Spread of Disease. J. D. Macpherson.
82 The Diagnosis of General Paralysis of the Insane. William L. Russell.
83 Infantile Eclampsia. A. J. Colton.
84 *On the Evidence of Nuclear Division of Certain Cell Inclusions (Thoma, Sjöbring, Plimmer's Bodies) in Cancerous Epithelium. Harvey R. Gaylord.

84. **Cancer.**—Gaylord gives his findings at length with numerous illustrations. He discovers in cancer bodies which seem to him identical in appearance with certain ameboid forms, and remarks in conclusion that the spores of *Plasmodiophora brassicæ* in the phagocytic cells of both warm and cold-blooded animals, when fixed and stained with the methods employed in the investigation of bird's-eye inclusions in cancer, under certain conditions, present an appearance indistinguishable from these inclusions. He also finds that a series of changes can be found in the bird's-eye inclusions in cancer closely resembling the process of nuclear division, as described by Nawaschin in the ameboid form of *Plasmodiophora brassicæ.*

Journal of Cutaneous Diseases, New York.

May.

85 *A Case of Paget's Disease of the Nipple. George Thomas Jackson.
86 Some Therapeutic Properties of Bone Marrow. Chalmers Watson.
87 *Secondary Eruptions in Smallpox. Jay F. Schamberg.

85. **Paget's Disease of the Nipple.**—Jackson reports a case with pathologic findings as given by Dr. Otto H. Schultze, who accepts Thin's designation of malignant papillary dermatitis for this condition. It is not an epithelioma, as commonly stated, but it is incurable and in the majority of cases associated with carcinoma. In all cases, extirpation of the breast with the diseased area without waiting for the clinical diagnosis seems advisable.

87. **Smallpox.**—In this well-illustrated paper, Schamberg describes several forms of secondary eruptions occurring in smallpox, including impetigo variolosa and other skin eruptions of secondary toxic or septic origin, such as exfoliative dermatitis, etc.

Toledo Medical and Surgical Reporter.

May.

88 *The Dietetic Treatment of Diabetes. Victor C. Vaughan.
89 A Study of Heart Lesions from Postmortem Work. S. W. Beckwith.
90 Uremia. E. W. Doherty.
91 Perineal Lacerations. Wm. J. Gillette.
92 Some Conveniences in the Practice of Gynecology and How to Use Them. J. D. Ely.

88. *Diabetes.*—The dietetic treatment of diabetes is discussed by Vaughan, who mentions his tests for sugar. He prefers Trommer's with Fehling's solution, and if there is no reduction sugar is probably absent, but to confirm this Nylander's test may be used. Where both or either of the preceding reactions have been positive, but not prompt and convincing testimony, he also employs the fermentation test, using a control test with normal urine at the same time, and finally, he often seeks confirmatory evidence with the phenylhydrazin test. Having ascertained that the patient is diabetic the question is how far he has lost his capacity of using carbohydrates, and for this purpose he has a graduated diet table for one week in which the carbohydrates are decreased from 330 grams per day to nothing on the seventh day, with a corresponding increase of fats and proteids. The table differs somewhat from those generally prepared in containing relatively more fat and less proteids. When the patient has reached the bill of fare prescribed for the seventh day he usually continues this for five days, during the last two of which the urine should be collected and tested for sugar. If it has disappeared from the urine under this diet, the case comes under the head of what is generally known as mild diabetes. Occasional tests are made to see the amount of carbohydrates that can be consumed without the reappearance of sugar, and then a steady diet is fixed according to the findings. There are certain difficulties, but this plan seems to him the best. He includes in his diet list a certain amount of wine, and says that in this disorder a certain amount of alcohol is often useful. As regards the difference between the mild and severe forms of diabetes, he thinks it is merely one of degree. The patient with mild glycosuria who allows himself to indulge in an excess of carbohydrates is likely to find himself sooner or later the victim of the grave form of the disease. For details of the diet table the reader is referred to the original article.

Medical Standard, Chicago.

May.

93 A Protest Against the So-called Antiseptic Treatment of Typhoid Fever. James G. Mastin.
94 The Operation for Pyosalpinx; with Report of 21 Cases and 5 Secondary Hysterectomies, with One Death. Raymond C. Turck.
95 Materia Medica vs. Christian Science. C. S. N. Hallberg.
96 A Rhinological Clinic. Jacob F. Burkholder.
97 Useful Therapeutic Measures in Phthisis. M. Shellenberger.
98 Pain and Its Indications. E. C. Hill.

Journal of Advanced Therapeutics, New York.

May.

99 *The Treatment of Carcinoma of the Rectum by Mercuric Cataphoresis. G. Betton Massey.
100 The Principles of Treatment in Diseases of the Gastrointestinal Tract. Sigismund Cohn.
101 The Relationship of Psychic Suggestion to Electro-therapeutics. Maurice F. Pilgrim.
102 The Prostatic Electrolyzer, in Its Time- and Trouble-Saving Aspects. John V. Shoemaker.

99.—This article has appeared elsewhere. See The Journal of March 28, title 70, p. 874.

Maryland Medical Journal, Baltimore.

May.

103 Retained Intubation Tubes. William T. Watson.
104 A Case of Multiple Sclerosis. Leonard K. Hirshberg.

Fort Wayne Medical Journal-Magazine.

April.

105 A Case of Lateral Sclerosis. B. Van Sweringen.

Oklahoma Medical News-Journal.

May.

106 The Treatment of Intestinal Catarrhs. H. Schandibauer.
107 An Unusual Gall Bladder Case. Emory Lanphear.
108 Urethral Caruncle. W. E. Dicken.
109 History of Case of Puerperal Fever. J. L. Hoshall.
110 The Psychological Factor in Medicine, and Its Application to Nervous Diseases. John Punton.

Canada Lancet, Toronto.

May.

111 Duty of the State in Regard to Tuberculosis. C. D. Murray.
112 Ontario Medical Association. John Hunter.
113 Some Indications for the Use of Arsenic and Sodium Benzoate. E. Kennedy.
114 Notes of a Case of Sarcoma of the Nose. J. Price Brown.

Journal of the Eye, Ear and Throat Diseases, Baltimore.

March-April.

115 Chronic Trachoma, Amenable to the X-Ray. Henry F. Cassiday and Francis C. Bayne.

Kansas City Medical Index-Lancet.

May.

116 Double Consciousness of Amnesia; Etiologic Factors, with Report of a Case. F. Savary Pearce.
117 Report of a Few Cases of Post-Cecal Appendicitis. H. C. Crowell.
118 The Psychological Factor in Medicine and Its Application to Nervous Diseases. John Punton.
119 Epithelioma of the Rectum—Report of a Case. J. M. Frankenburger.
120 Syphilis of the Nervous System. F. E. Coulter.

Carolina Medical Journal, Charlotte, N. C.

April.

121 X-Rays in the Treatment of Superficial Cancers. Alfred L. Gray.
122 The Diagnosis of Cutaneous Cancers. F. H. Beadles.
123 Some Theories as to the Causation of Cancer. Greer Baughman.
124 Symptoms and Treatment of Calculus Anuria. E. L. Keyes, Jr.

Medical Times and Register, Philadelphia.

April.

125 The Second Sight. W. R. D. Blackwood.
126 A Brief History of the Therapy of Various Forms of Light and Radiotherapy. James M. Winfield.
127 Nasal Catarrh, Fibroid and Mucous Polypus. J. D. Ely.

Atlanta Journal-Record of Medicine.

April.

128 Some Theories as to the Causation of Cancer. Greer Baughman.
129 X-Rays in the Treatment of Superficial Cancers. Alfred L. Gray.
130 Case of Pregnancy Complicated with *Albuminuria and* Mitral Regurgitation. O. L. Holmes.
131 Ankylostomiasis Duodenale. A. B. McMillan.
132 The Diagnosis of Cutaneous Cancers. F. H. Beadles.
133 The Treatment of Chronic Bronchitis. Robert C. Kenner.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Revue de Chirurgie, Paris.

1 (XXIII, 4.) *Functions of Arm After Resection of Scapula. E. Quénu and G. Renon.—L'état fonctionnel du membre supérieur après la résection totale de l'omoplate pour néoplasmes.
2 *Indications et contre-indications de la solution salée-sodique. E. Tavel.
3 **L'appendicite et l'opium.* C. Krafft (Lausanne).
4 *De la ligature des veines et en particulier de la veine cave inférieure. G. Houzel. (Commenced in No. 3.)
5 Fractures ou anomalies de développement de la clavicle. C. Féré and E. Papin.
6 Experimental Study of Fractures of Petrous Bone. M. Patel. Remarques sur certaines variétés de fractures isolées du rocher. Etude exp.
7 Obituary of T. Gaillard Thomas (New York).
8 Ibid., of G. Bouilly (Paris).

1. Arm After Resection of Scapula.—Quenu removed the entire scapula from a youth of 16, on account of an osteosarcoma, in October, 1902. He gives 8 cuts showing the fine functioning of the arm at present and the radiographic findings. He has found 38 similar cases in the literature in which the scapula had been removed on account of a malignant tumor with retention of the arm. In 25 cases the results have been highly satisfactory and in all of this number fixation of the humerus had been included in the intervention. This was realized by cicatricial adhesions from the long suppuration in the earlier cases, and in the others by preservation of the acromion or suture of the remnants of the capsule, either to the clavicle or to its ligaments, thus re-establishing the muscular attachments. It is not always easy to re-establish the continuity of the muscles, but it must be done as far as practicable. By operating on these principles the arm will be firm and freely movable. Eight at least of the cases he cites are American.

2. Tavel's Salt-Soda Solution.—In 1892 Tavel recommended a saline-alkaline solution as superior to the physiologic salt solution for flushing and sterilizing purposes, on account of certain of its properties. It induces a slight irritation which elicits leucocytosis and phagocytosis, and thus favors the healing of wounds. He never recommended it for subcutaneous or intravenous injection and deprecates such a use for it.

3. Appendicitis and Opium.—Krafft points out that when a physician refers to appendicitis he has in mind an inflammation of the mucous lining, while the surgeon always means inflammation of the serous membrane. Much confusion would be avoided if the latter would say "periappendicitis" instead of "appendicitis." Inflammation involving the surrounding parts is more than mere appendicitis. Krafft further argues to prove that purgatives and rectal injections are dangerous in periappendicitis, as the peritoneum, which is always inflamed in this condition, is hindered in its task of encapsulating the lesion if it is shaken and disturbed. Surgeons do not give opium to cure the periappendicitis, but merely to soothe the pain and reduce peristalsis while waiting for the operation. The latter is the only rational treatment, and opium is an adjuvant for it. It relieves the patient and, by resting the intestine, favors the formation of adhesions. Injections and purgatives are useless and may be dangerous. They should always be proscribed the moment the physician notes a sensitive area at McBurney's point. Until the tenderness develops, the case belongs to the physician, as it is still in the mucous membrane stage, and purgatives, injections and other measures to disinfect the large intestine and its adnexa may ward off eventual periappendicitis, but so soon as tenderness at McBurney's point is discovered, the surgeon should be called in to superintend the further developments.

4. Ligature of Vena Cava.—Houzel reviews the history of ligatures of veins, especially of the inferior vena cava, and describes a personal case in which it was successfully done. He also quotes in full Bottini's similar operation and a third one by Schede, in which the patient succumbed eighteen days later. In his own case the inferior vena cava was torn during a nephrectomy for an old, large pyonephrosis. The patient was a woman of 36, a street vender, otherwise healthy. The vein was the size of a thumb, clinging close to the spine, and was torn for about 1 cm., the blood spurting as if from an artery. A catgut ligature was applied above and below the tear, just beyond the forceps on each side. The renal vessels were each ligated separately and the kidney removed entire, without escape of pus. Except for a slight, transient edema of the legs, no disturbances were noted from the complete arrest of the venous circulation in the cava, either in this case or in Bottini's. In Schede's case a lateral suture was applied, not a ligature. Theoretically, this is the preferable intervention, but his patient died, while the two others recovered. The autopsy showed fatty degeneration of the heart, with slight constriction at the point of the suture. Lateral suture exposes to the danger of thrombosis or embolism. Purpura experimented on dogs, and found that abrupt ligation of the vena cava was always fatal, but that if the vein were first constricted for a time and then ligated, the animals bore the intervention without apparent injury. In the cases above described the circumstances were probably of the same character. The pressure of the tumor had compressed the vein and thus prepared it for successful ligation. In Bottini's operation a portion of the vein was resected adherent to the tumor, a lymphosarcoma Recovery was interrupted by an abscess, after which it proceeded normally. Marconi, who reported the operation in the Italian "Clinica Chirurgica" of Dec. 31, 1893, qualified it as "the greatest operation ever done at any epoch or in any country." Illustrations of the tumor and adherent ring of vein accompany this article.

Klinisch-Therapeutische Wochenschrift, Vienna.

Last indexed page 1267.

9 (No 51) *Treatment of Arteriosclerosis with an Organic Serum C Trunecek (Prague) —Die Behandlung der Arteriosklerose mit subkutanen Injektionen von anorganischem Serum (Commenced in No 50)
10 Results for Child of Artificial Premature Delivery. A Mueller —Ueber die Erfolge der künstlichen Fruhgeburt für das kindliche Leben
11 (No 52) Plastic Reproduction of Infants' Stools. H Roeder —Ein Beitrag zur Anwendung der Moulagentechnik
12 *Formol Phenol Treatment of Lupus and Cancer. A. Ranelettl. —Ueber eine neue Behandlungsmethode der einem operativen Eingriffe unzulanglichen krebsigen und anderweitigen bosartigen Neubildungen und des Lupus
13 (X, 1.) Epilepsy and Hysteria, Especially Morbid Disturbances in Consciousness from Forensic Standpoint. M Koppen —Ueber Epilepsie und Hysterie in forensischer Beziehung insbesondere uber die krankenhaften Bewusstseinsstorungen
14 Feeding Instinct and Hunger. A. Meisl —Ernahrungstrieb und Hunger
15 *Prophylaxis of Otitis in Measles M Sugar —Ueber Masernotitis und deren prophylaktische Behandlungen
16 Die toxischen und autotoxischen Dermatosen S Ehrmann
17 (Nos 2 to 5) Extirpation of Spleen on Account of Torsion of Pedicle of Movable Spleen E Ullmann —Milzextirpation wegen Stieltorsion der Wandermilz
18 Spondylitis typhosa W Berent Collective Review
19 Migrane und habituelle Obstipation F Schilling
20 Tests of "Nutrient Sugar" E Moro —Ernahrungsversuche mit Soxhlet's Nahrzucker.
21 Ueber Diagnose und Therapie der Migrane J P Karplus
22 (No 6) *Zur Anwendung subkutaner Injektionen von Gehirn-Emulsion bei Tetanus traumaticus A Krokiewicz.
23 Disputed Questions in Syphilidology. M v Niessen.—Syphilidologische Streitfragen (Commenced in No 5)
24 (No 7) *Zur lokalen Behandlung interner Affektionen. M Schuller
25 Infantile Cirrhosis L Bartenstein —Die Leber Cirrhose im Kindesalter (Commenced in No 6)
26 Nervous Affections in Arteriosclerosis and Uric Acid Diathesis M Sternberg —Ueber nervose Erkrankungen bei Arteriosklerose und harnsaurer Diathese.
27 (No 8) Ueber die Wirkung des Ichthargans bei den gonorrhoischen Erkrankungen des Weibes G Woyer.
28 *Zur Etiologie des Koterbrechens J Plesch
29 (No 9.) Ueber blennorrhoische Gelenkserkrankungen (joint affections) G Nobl
30 (No 10) Ueber extrauterine Graviditat. L v Dittel
31 (No 11) Boric Acid in Scorbutus V. Vohryzek —Ueber den therap Werth der Borsaure bei Skorbutus (Commenced in No 10)
32 Reflex and Radiating Processes from Ear V Urbantschitsch —Ueber die vom Ohre ausgehenden Irradiations und Reflex-Vorgange
33 (No 12) Beitrag zur Behandlung des Pes calcaneus paralyticus E Scheffler (Schanz's Orthopedic Institute, Dresden).
34 Zur Therapie der Neurasthenie A Hollander

9. Treatment of Arteriosclerosis with Anorganic Serum.—The Journal has published accounts of the experience of various writers with Trunecek's "serum" from time to time He states now that the direct indications for it are permanent high pulse tension (without nephritis), dyspnea, cyanosis, angina pectoris, symptoms of arteriosclerosis of the brain and chronic alcohol intoxication. Besides these conditions, a favorable effect may be anticipated when, in addition to subjective symptoms of arteriosclerosis, the urine is very acid or contains a large amount of urates or calcium oxalate. Drinks and exercise should be avoided that tax the heart. The food should be selected with a view to facilitate oxidations and increase alkalinity, and taken in small amounts at a time. The serum reduces the arterial tension, and with this subside the subjective symptoms, the sounds in the ears, vertigo or polyuria It has proved a sovereign remedy for the dyspnea of arteriosclerosis, even in cases in which the symptoms had not been relieved by sedatives In severe cases the injections may have to be repeated every third day. The benefit is not always constant in angina pectoris, some cases proving rebellious, while others are quite cured by 15 to 20 injections, at intervals of four or five days In a case of aneurism of the right subclavian with compression of the brachial plexus, the dyspnea which occurred constantly on the slightest exertion was completely cured and the paresis of the right arm much improved. The patient felt quite well for fifteen months, when the arm involved became the seat of severe pains, which vanished after injection of 150 c c. of the serum. In a case of aneurism of the aorta the paresis of the recurrens was also partially relieved by the treatment, but the patient succumbed later. In various paretic conditions, especially those consecutive to apoplexy, even after they have lasted for months and years, striking and durable improvement may be attained by 8 to 10 injections of 3 to 5 c c. each, repeated at three to five day intervals. By the time 100 to 150 c c. have been injected the patient is usually completely cured. It is also effective in cases of chronic alcoholism free from gross lesions in kidneys or liver. Appetite and sleep return in arteriosclerotic cachexia, and the cyanosis is usually entirely banished by injection of 10 c c. of the serum. The composition of the serum was described in The Journal, xxxviii, p. 484. Trunecek thinks that its action is probably due in part to its binding a certain amount of the carbon dioxid in the blood. As much as 2 c c. are bound by the usual injection of 5 c c. of the serum. He finds it more difficult to explain why the function of the heart and paretic conditions are so much improved by even a small amount of the serum.

12. Formol-Phenol Treatment of Cancer and Lupus.—Ranelletti reports further experiences with his "mirmol," a combination of 10 per cent. formol with .3 per cent. phenol, for local application to malignant neoplasms and to lupus. The lesion is first cleansed with warm water to which 20 to 40 drops of formalin have been added per liter. After drying, it is swabbed with a solution of the mirmol, one part in nine parts warm water at first, gradually increasing to a 25 per cent. solution or using full strength, and an impermeable dressing applied. He describes 35 cases of malignant neoplasms treated on these principles and a few typical cases of lupus to portray the great benefit derived. The results of mirmol treatment are durable, he adds, and he recommends it for general adoption for cases in which surgical intervention is impracticable and in which the lesion can be conveniently bandaged. One of his lupus cases had resisted years of treatment of various kinds, including a course of tuberculin, the ulceration constantly discharging and the lesions spreading. Under mirmol the ulceration dried up and was substituted by cicatricial tissue, the large nodules became atrophied and the smaller disappeared entirely. The patient moved away from the city before treatment had been quite concluded, but the lupus had been reduced to a very few minute ulcers.

15. Prevention of Otitis in Measles.—Sugar has every child with measles treated when first seen by instillation of a few drops of a 5 per cent. solution of silver nitrate, dropped into the nose as the child lies on his back. Where this has been done as a routine prophylactic measure, otitis developed in only 4 out of the 60 children. On the other hand, in an experience of 111 children not thus treated otitis was observed in 18.

22. Subcutaneous Injection of Brain Emulsion in Traumatic Tetanus.—Krokiewicz brings up to 16 the number of cases, by reporting 3 personal and 1 from Gluzinski's practice. Three of the 16 terminated fatally and in 8 of the 13 recoveries the clinical course had been exceptionally severe. On account of the simplicity and harmlessness of the subcutaneous injection of brain emulsion he reiterates his former appeals to practitioners in general to resort at once to it in cases of tetanus. An emulsion of rabbit brains was used in the 4 cases that he reports. In one 6 injections were made in seven days, the emulsion containing the entire brain of a rabbit each time; in the others, 4 and 5 injections. Previous medicinal treatment had been entirely ineffectual. He thinks that the mortality would be materially reduced if the injections were undertaken earlier.

24 Local Treatment of Internal Affections.—Schuller had occasion to treat, in 1894, a woman with an abscess in the lung consecutive to grippal pneumonia. After evacuation of the abscess a chronic infiltration of the lobe of the lung persisted, inducing a kind of chronic hepatization, rendering the entrance of air impossible. After the failure of internal medication he injected into various portions of the infiltrated lung about 120 gm. of sterile saline solution. The benefit was evident in a few days. The cough diminished, the sputa became more fluid, the dulness retrogressed and the respiration improved. The saline solution had loosened up the masses accumulated in the alveoles and favored their expulsion in sputa or their absorption, allowing access to the air. The general health rapidly improved as the circulation in the lungs returned to normal. A year later there was no trace of dulness and respiration was full and deep.

28. **Etiology of Fecal Vomiting.**—The patient observed by Plesch had an incipient tuberculous affection in lung and in the intestines, with a history of well-treated syphilis a few years before. The *symptom of fecal vomiting* was observed for a year, but no sensitive point in the abdomen could be palpated, and no aggravation followed the commencement of the fecal vomiting. The autopsy showed a fistula between the stomach and transverse colon.

Muenchener Med. Wochenschrift, Munich.

35 (L, 14.) *Individuality of Species in Respect to Albuminoids in Milk. A. Schlossmann and E. Moro.—Zur Kenntnis der Arteigenheit der verschiedenen Eiweisskörper der Milch.
36 Serum Reaction with Liver Abscess. Megele.—Widal'sche Serumreaktion bei Leberabszess.
37 *Births After Symphysiotomy. O. Ihl.—Ueber Geburten nach Symph.
38 Bericht über eine durch Schussverletzung bedingte Splenecktomie. L. Brenntleck.
39 *Treatment of Anthrax. Federschmidt.—Zur Kasuistik und Therapie des äusseren Milzbrandes des Menschen.
40 *Fall rhinogener Pyämie mit Ausgang in Heilung. Gruuert.*
41 *Zur Diagnostik der Darm-Okklusion. Schneiderlin.
42 *Spontaneous Disintegration of Urinary Calculus. L. Görl.—Spontanzertrümmerung eines Blasensteines.
43 *Semi-Symphysiotomie. Diehl.—Die halbe Symphysiotomie.
44 *Prophylaxis of Seasickness. O. Dornblüth.—Kurze Bemerkung über die See-Krankheit.
45 (No. 15, April 14.) *Anesthetic Action of Yohimbin. L. Loewy and F. Müller (Berlin).—Zur Kenntnis der anästhesierenden Wirkung des Yohimbins (Spiegel).
46 *Ueber juvenile Tabes und ihre Beziehungen zur hereditären Syphilis. P. Linser.
47 Zur Symptomatologie und Therapie des spastischen Schiefhalses (Torticollis spastica), nebst Bemerkungen über die Wirkungsweise elastischer Zügel in der Orthopädie. K. Hasebroek (Hamburg).
48 Gummata at Point of Mercurial Injections. F. Juliusberg (Neisser's Clinic, Breslau).—Gummata an Injektionsstellen von Quecksilberpräparaten.
49 *Serum Treatment of Bubonic Plague. G. Polverini (Bombay and Florence).—Serumtherapie gegen Beulenpest.
50 *Fall von hysterischem Fieber. Tillmann (Tsingtau).
51 *Abnormal Movability of Calculous Gall Bladder. V. Lieblein (Wolfler's Clinic, Prague).—Ueber abnorme Beweglichkeit der Steine fuhrenden Gallenblase.
52 Rare Case of Measles. B. Machold.—Ein seltener Masernfall.
53 Forensic Study of Paranoia. K. Heilbronner.—Ueber die Entmündigung von Paranoikern. (Commenced in No. 14.)
54 *Medical Press in Germany. E. Roth.—Das med. Zeitschriften-Wesen in Deutschland von 1853, 1875 und 1901.
55 (No. 16.) Comparative Study of Blood of Mother and Infant, Amniotic Fluid and Fetal Urine Secretion. W. Zangemeister and Th. Meissl.—Vergleichende Untersuchungen über mütterliches und kindliches Blut und Fruchtwasser, nebst Bemerkungen über die fötale Harnsekretion.
56 *Zur Therapie der Hematocele bei Extrauteringravidität. F. Schenk (Prague).
57 Apparatus for Sterilization of Small Dressings. K. Holzapfel (Kiel).—Zur Sterilisation kleiner Verbandsstoffmengen.
58 *Heart and Apex Beat with Aortic Insufficiency. G. Galli (Baccelli's Clinic, Rome). Herz- und Herzspitzenstoss bei Aortenklappeninsuffizienz.
59 Changes in Blood After Extirpation of Spleen. E. Rautenberg (Königsberg).—Beobachtung von Blutveränderungen nach Milzexstirpation.
60 *Ueber 2 Fälle von perniziöser Anämie. K. v. *Hösslin.*
61 Ueber Ventilation. K. Wolf.
62 Algebraic Formulæ for Mixtures of Various Degrees of Concentration. Gossner (Brandenburg a. H.)—Formeln zur Herstellung von Mischungen verschiedener Konzentration.
63 Case of Fatal Poisoning with Potassium Bichromate. F. Berka.—Vergiftung mit Kalibichromat.
64 Thermophore Syringe for Paraffin. E. Kantorowicz (Berlin).—Eine neue Paraffinspritze.
65 Die Gefahr der Infektion mit Ankylostoma duod. im Grubenbetrieb. H. Bruns.
66 *Treatment of Laryngeal *Tuberculosis.* E. *Kronenberg* (Solingen).—Die Behandlung der Kehlkopftuberkulose. (Commenced in No. 15.)

35. **Specific Albuminoids in Milk.**—The research described confirms the specific character of the constituents of the milk of various species and the importance of mother's milk for infants. A large proportion of the albumin in human milk is dissolved in the milk in the form of "laktalbumin," all ready to pass from the blood of the mother into the blood of the child through the milk, without requiring any chemical transformation. Cow's milk contains very little of this "laktalbumin," and it is altered by heat and requires some chemical transformation before it can be taken up by the infant's blood, in the meanwhile exerting a toxic action. The albumin of one species has an unmistakable *toxic action* on another species, until the system becomes accustomed to it, like alcohol and nicotin.

37. **Births After Symphysiotomy.**—Three women were delivered at Gessner's Maternity at Erlangen who had previously undergone symphysiotomy. One had borne five children since. In all the conditions were so improved by the symphysiotomy that subsequent births *proceeded normally* in every respect. Ihl has found only 84 births on record after symphysiotomy. In 50 the delivery was normal; in 24 a second symphysiotomy was required; in 4 version and extraction; in 5 artificial delivery, and in 1 perforation. There is no doubt that, with a child of ordinary size, the pelvis remains permanently enlarged after symphysiotomy.

39. **Treatment of Malignant Pustule.**—Federschmidt advocates immediate excision and reports 3 threatening cases in which *excision was followed by complete recovery in one to three days.* In 7 other cases in which treatment was medicinal or expectant, 2 deaths occurred.

41. **Diagnosis of Intestinal Occlusion.**—A young woman of 26, with hysteric antecedents, presented symptoms suggesting appendicitis with high fever, and the red, swollen appendix was resected. Some hard masses were palpated in the cecum at the time. The pains recurred and the temperature rose again and again to 40.5 C. At a second laparotomy the hard masses in the large intestine were then recognized as foreign *bodies adherent to the walls.* They were cautiously manipulated and massaged until detached from the walls and worked along towards the rectum. The abdomen was then sutured. Several hours later copious irrigation of the intestines resulted in the evacuation of ten linen rags, each 4 or 5 sq. cm. in size, and two more were voided a few days later after another brief elevation of temperature, which fell as soon as the rags were passed.

42. **Spontaneous Disintegration of Urinary Calculus.**—Görl was able to watch with the cystoscope the gradual crumbling of two stones in the bladder as the patient, an obese man, was put on an Ebstein diet and two quarts a day of a lithia water.

43. **Half Symphysiotomy.**—Diehl reports the successful delivery of a very small woman with a generally contracted pelvis, by slitting the upper half of the symphysis alone. This semi-symphysiotomy proved sufficient to allow delivery of the child, and the mother was able to be up in three weeks and *was soon at work as before, with no apparent trace* of the intervention.

44. **Prevention of Seasickness.**—Dornblüth points out that the disagreeable sensations of seasickness, riding in elevators, etc., are connected with the descending motion. He has found that if he takes a deep breath as the descending motion commences, the abdomen is distended and held firm by the diaphragm and no disagreeable sensation is experienced. The *measures that have been recommended against* seasickness accomplish the purpose as they comply with these conditions, immobilization of the abdomen during the descending motion. He believes that the resistance to seasickness can be enhanced by taking 2 or 3 gm. sodium bromid every evening for a week beforehand and during the trip, if a long one. He adds that it is very important to take regular meals at the accustomed hours, and that an abdominal bandage may well substitute the corset.

45. **Discovery of Anesthetic Action of Yohimbin.**—Loewy refers to Lewitt's article in the "Deutsche Med. Wochft.," 1902, Nos. 47-48, which presents all the facts and literature to date in regard to the efficacy of yohimbin in curing impotency. Magnani has recently discovered that the conjunctiva and *cornea lose all sensitiveness* for half an hour after instillation of a few drops of a .3 to 1 per cent. solution. The conjunctiva becomes hyperemic, but the pupil is not affected, in which

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Original Articles.

MEDICAL DISCOVERIES BY THE NON-MEDICAL.

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PHILADELPHIA.

I have been struck by the fact that the majority of great medical discoveries, truths and instruments, have not been made completely and suddenly, but have been led up to by preliminary and progressive steps, and that the layman has so often made these discoveries prior to the medical practitioner. This great medical truth is, indeed, but an illustration of the general law that all professional progress, in whatever branch of study, is somehow or other a result of stimulus from without. There is so much interest, and there are so many lessons to be drawn from such observations in medical history, that I have in late years kept minutes of this class of truths, from which I make the following selections:

When we commence observation of the origins of medical discovery and treatment, we are struck by the fact that "our brothers the animals" were first in learning not a little of medical art. It has been noticed[1] that birds often show a true surgical instinct. M. Tatio on several occasions has killed woodcock that were, when shot, convalescing from wounds previously received; and in every instance found the old injury neatly dressed with down, plucked from the stems of feathers, and skilfully arranged over the wound, evidently by the beak of the bird. In some instances a solid plaster was thus formed, and in others ligatures had been applied to wounded or broken limbs. Ten times in his experience he has found birds whose limbs had been broken by shot with the fractured ends neatly approximated and ligated together—a statement that is vouched for by no less a naturalist than Fulbert Dumonteil. Dr. James Weir[2] says that when bees are attacked with diarrhea they at once begin to suck astringent pieces of the dogwood, poplar, wild cherry, or hickory, and readily cure themselves. Their instinct carries them so far that "in winter if they should happen to be afflicted with diarrhea, they will readily drink a decoction of wild cherry if it is placed in the hive. Moreover, they seem to know that filth is a source of disease, for in winter all the sick members of the hive deposit their dejecta as far from the combs as possible. As soon as warm weather arrives, the accumulated filth is removed and the spot carefully cleansed." Dr. Weir further believes that many of the higher animals have discovered and use a materia medica that should be recognized by human physicians. For instance: Dogs will seek out and devour the long blades of couch-grass (*triticum repens*) when they are constipated; horses and mules will eat clay when they have "scours"; cattle with eczema have been seen to plaster hoof and joint with mud. He speaks of seeing a cow break thin ice on a pond and treat her itching joint to a mud poultice. Cats will go miles when they are "under the weather" for a dose of catnip. The saliva of animals seems to have a distinct curative action. Dogs, cats, cattle, rodents, monkeys—all lick their wounds when they can get at them, and soon effect cures. Weir also tells of a large dog-faced monkey who scratched his shoulder badly on a projecting nail in his cage. He immediately went to a corner and, seizing a handful of clean sawdust, pressed it on the bleeding scratch. In a few moments the bleeding ceased and the blood dried, leaving a coating under which the healing was prompt. Rev. Egerton R. Young,[3] a missionary in northwestern Canada, shows us that the surgical instincts of the dog may become so far developed as to produce a real surgeon-doctor. One of his dogs spontaneously took up this work, and became so expert that the Indians called him *Muskeke Atim*, the surgeon. Galls, wounds, frozen feet, etc., in the other dogs were successfully and systematically treated by Doctor "Rover." The wounds or sores that could not be reached by the dog's own tongue did not heal. The fact shows that, in a state of health and with pure food, the dog's saliva has a perfect bactericidal and healing power. Perhaps it would make an ideal antiseptic. No bacteriologist has caught the hint.

The logical or evolutional order of the subjects of my list would be to pass from the medicine of animals to that of savages, and so, finally, reach the more compact body of truth now held by the profession. I am compelled, however, to take the matter up topically, in order better to place it before you; the contributions of primitive men must, therefore, be noticed as we proceed from subject to subject.

In the history of medicine *ophthalmology* was one of the earliest subjects to command professional opinion. The eye is the most important of all the organs of sense, and blindness the greatest of afflictions. The early gatherings of medical lore, in large part, relate to the eye. The operation of *couching cataract* goes so far back in primitive times that Ælianus says that men learned it from goats, who, by pushing their heads against the thorns of a thorn-bush were accustomed to operate on their own cataractous eyes. It is noteworthy that in the operation by the Greeks a mydriatic was used and local anesthesia, as well as general narcosis, was induced.[4] The greatest discovery in this specialty is held to be the ophthalmoscope, but two others, in my estimation, far outrank it. Before Helmholtz, a non-medical man, Babbage, doubtless devised an strument "for the purpose of looking into the interior of the eye," and even Helmholtz said of himself that it was not inclination but external circumstances that forced him to become, temporarily, a physician.

According to Dr. John Green,[5] *spectacles,* both convex and concave, were in common use by the Chinese before the opening of commerce with Europe. They were made of a transparent stone, of a color like that of a strong infusion of tea, called scha-chi (tea-stone), and were tied on the head by silken cords. The common use of some form of magnifying glass by the ancients is well proved by their perfect workmanship, as displayed in the engraving of gems; and a crystal wrought in the form of a convex lens has been actually discovered in the ruins of Nineveh by Sir Francis Layard. Pliny's description of the visual defect of the Emperor Nero strongly suggests compound astigmatism. The statement that Nero was accustomed to view the conflicts in the arena by means of a smaragdus would seem to be best explained by assuming that the emperor possessed a large, highly-polished emerald, very likely of uneven curvature in its two principal diameters. The theory implies that the use of the gem for this purpose was the result of an observation made by Nero himself, who may, therefore, be credited with the accidental discovery of an eyeglass suited to myopia or compound myopic astigmatism; the invention apparently died with the inventor. Certain it is that spectacles were in common use for at least 150 years before the theory of their action was explained. Bifocal lenses were devised by a layman, Benjamin Franklin.

Although a physician discovered *astigmatism,* it was the mind of the natural philosopher or physicist in him that made the discovery, not that of the medical man. The discovery of the clinical significance of astigmatism was made by a physician, S. Weir Mitchell, 75 years later.

The laryngoscope is one of the best illustrations of a great medical discovery made by a non-medical man. The inventor of this instrument was a singing master of London, Señor Mañuel de Garcia, who was still living[6] in London in 1901, in his 98th year. In 1855 he presented a paper to the Royal Society of London, entitled "Physiologic Observations on the Human Voice." His investigations were carried out on himself by means of mirrors, a small one at the end of a long stem, for introducing into the pharynx, and a large one, which served both for directing the light on to the small mirror and to enable the operator to see the image formed on it. Garcia's invention was treated by the English with apathy and even incredulity. His paper, however, fell into the hands of Türck of Vienna, who failed with the device, but later, Czermak converted it from a "physiologic toy" into an instrument of scientific research and popularized its use by his demonstrations on his own throat in Vienna, London, and elsewhere.

In the seventeenth century Sir Kenelm Digby published his book on the cure of wounds by the "Powder of Sympathy." The knowledge of this wonderful powder, he says, came from a priest just returned from the Orient. By the aid of this "vitriol" he claimed to heal wounds without either touching or seeing the patient, by dissolving some of it in a vessel containing water, and putting in this water any article having on it blood from the wound to be treated. In the meantime the patient was advised "to cast away all plasters, only keep the wound clean and in moderate temper 'twixt heat and cold." However absurd this may seem, Draper tells us it was the beginning of the doctrine of *adhesion,* or the cure of wounds by immediate union, a practice little appreciated until the days of John Hunter; while Dr. W. A. Hammond claims that it embodied all there is of real value in our modern antiseptic treatment of wounds, and occasioned a greater revolution in the treatment of wounds than has been accomplished in later times by Lister and his followers.

I make the following excerpt from Baas[7]:

> *The first cesarean section* on the living and parturient woman was practiced by the sow-gelder, Jacob Nufer, of Siegershausen in Thurgau, on his own wife, about the year 1500. After 13 midwives and several lithotomists had endeavored in vain to relieve her, her husband, having invoked the assistance of God and obtained the special permission of the governor of Freuenfeld, operated "just as on a sow" with such good fortune that the mother survived to the age of 77, and was able subsequently to bear several children—and even twins—in the usual way. Undoubtedly, therefore, the operation was unnecessary, and the same was true of many of the operations which soon followed; for cesarean section became the fashion for a short time. A sow-gelder is said to have removed the ovaries of his own daughter in consequence of her lasciviousness, during the 16th century (Weyer tells the story), so that such fellows and operative gynecologists are to be considered the predecessors of Hegar, and to be praised accordingly.
>
> As a result of this enrichment of the technic of operative midwifery by a simple sow-gelder, the cesarean section seems in the course of the 16th century to have been practiced repeatedly, e. g., in Italy in 1540 by Christof. Bain; 1531, in Neusse; 1549, by Paul Dirlewang, on Marie Volcser, in Vienna, etc. Now, however, it was performed in a somewhat more becoming fashion, and chiefly by barbers, though some will admit as the first actual cesarean section only the one performed by Surgeon Trautmann in Wittenberg in 1610.

Celiotomy, according to Dr. Benjamin Howard,[8] was known by Japanese physicians of "centuries ago," one of whom wrote, "When medicines are ineffectual, as well as acupuncture, and the cautery, the abdomen and back may be opened, and the stomach and intestines washed."

According to Dr. W. J. Hoffman,[9] the Coyosteras Apaches employed a *splint in fractures* and gunshot injuries of the extremities that is well worth interest. An illustration is shown of an appliance used by a warrior for a comminuted fracture of the middle third of the left humerus. Strips of cedar wood, ¼ inch thick, ¾ inch wide, and 8 inches long, were bound together with sinew and applied to the arm by tying the loose ends of the sinews. Through the spaces between the strips water could be applied and a free discharge likewise secured.

Dr. McClanahan[10] says of the Indian *treatment of compound fractures:*

> First, reduction by extension and counterextension. Some of the medicine men acquire considerable skill in manipulation and their results are creditable. Next all the openings are filled with bone-marrow extracts. Then over all is smeared a coating of the scrapings of rawhide boiled in water. This forms a gelatinous layer having considerable strength. Over this and around the entire limb is placed a covering of fine inner bark, when the limb is ready for the splints. These go entirely around the limb, being held in place by circular strips of cloth. If it is an arm, this is carried across the chest and retained by a circular bandage about the neck.

Franklin Staples[11] states that the Talmud describes, among other operations, one for *stone in the bladder* and others for the reduction of various fractures and dislocations.

F. Poncet[12] pictures a terra cotta image found in Phœnicia, in which there is represented a perfect hernial bandage, with two metallic plates, to be fitted over the inguinal openings. It leaves practically no doubt that the Phœnicians recognized *hernia* and knew of its *successful mechanical treatment.*

According to the Talmud, *carbuncles* were manipulated with the fingers and then cut crosswise (crucial incision of to-day). In *atresia of the anus,* splitting of the skin down to the rectum is mentioned. (Sabb. 134, 1.)

The collections of surgical instruments made from the ruins of Herculaneum and Pompeii bear witness to a high degree of specialization and art on the part of the Roman surgeons of that time.

Wunderbar enumerates from the Mishna and the Talmud no less than 56 forms of surgical instruments and appliances, exclusive of the obstetric stool referred to in Exodus, 1:16.

Surgeon-Major William Curran[13] says:

> Narrating in a kind of autobiography the adventures of Captain Creighton (who fought under Montrose or Dundee in Scotland) and describing how Creighton had sustained wounds in a fight at Airs-Moss, Swift represents Creighton as speaking of his wounds as follows:[14] "My surgeon, having unfortunately neglected to tie a string to the tent of green cloth which he used for the wound, the tent slipped into my body, where it lay under my navel seven months and five days, and pained me exceedingly. The tent lying thus in my body made it impossible that the wound could heal. Wherefore I ordered some pipes to be made in a mould through which the thin corruption continually issuing out of the wound, might be conveyed as through a faucet. These pipes I cut shorter by degrees as I imagined the wound was healing from the bottom, till at last they became too short. Wherefore I made a coarse pipe myself which was long enough. This pipe, after the wound was dressed with brandy, was removed daily; and it happened one morning when the pipe was drawn out as usual, that the tent followed. Then I knew I should soon be well."

This Captain Creighton, in 1730-1735, was, therefore, the inventor of *drainage tubes.*

According to Dr. V. Deuffe, of the University of Ghent,[15] the rectal and vaginal speculum dates at least from 1000 B. C., a Sanscrit treatise by Sussutas (translated in 1844 by Hessler), describing such an instrument. It is also mentioned by Hippocrates and by other writers of the Alexandrian school, and has been found in the ruins of Pompeii.

In casting about for some means of combating mammary cancer, Beatson became interested in the custom prevalent among Australian farmers of *spaying cows* during lactation, in order to prolong indefinitely the period of lactation. It is during this period that there is enormous reproductive cell-activity with rapid destructive cell-metamorphosis. The cells involved in this process are of the identical epithelium, which undergoes hypertrophy in cancer of the breast, the difference being that in cancer continued growth of the epithelium takes place without any breaking down of tissue. The spaying results in cows, therefore, led him to try the same operation on women with *mammary cancer* in the hope that it would set up retrograde metamorphosis of the cancer cells. In several cases of inoperable cancer of the breast, he witnessed the disappearance of the tumor after *ovariotomy.* Abbe,[16] too, reports two remarkable cases in which ovariotomy was followed by rapid disappearance of recurrent cancer of the breast.

Anders[17], writing of the Winnebago and Dakota Indians, says that, as regards surgery, they never amputate. In large incised wounds, the parts are carefully brought together and secured with sutures of animal sinew, which they remove in 6 or 8 days.

As to *anesthesia,* Dioscorides[13] tells of a draught that may be given to human beings, before they undergo the pain of the surgeon's knife or cautery. Later, Pliny gives the formula of this draught, which was not only reputed to annul pain but was credited with producing a death-like sleep. Dioscorides further says, "a wine is prepared from the bark of the mandragora root, and three cyathi (a little more than four ounces) of this is given to those who require to be cut or cauterized, when, being thrown into deep sleep, they do not feel any pain." Pliny[18] remarks that the juice of the leaves of the mandragora is more powerful than the root. Of such a preparation he says the dose is six drams, to be taken before cuttings and puncturings. Speaking on the same subject, Apuleius[16] says that if any one is to have a limb mutilated, burnt, or sawn, he may drink a half ounce of the preparation, with wine, and while he sleeps the member may be cut off without pain or sense.

An editorial in *American Medicine,* April 19, 1902, says:

> From the fact that ancient anatomists referred to the carotid artery as *arteria soporifera* and that the Russians still call it *sonnaia* (the artery of sleep) it appears that it has long been known that, by compression of the carotids, a state of anesthesia may be produced. It is not surprising therefore to find that among the natives of Java, Madura, and Banku, a procedure for obtaining narcosis is in extensive use under the name of *tarik urat-tidor,* or compression of the soporific vessels. The anesthetizer sits in front of the patient and grasps the patient's neck with the fingers, the thumbs placed back of and a little below the angle of the lower jaw, compresses the internal carotid artery against the spinal column. Complete loss of sensibility and of consciousness is produced. L. Steiner,[19] of Saerabaya, Java, points out the absolute harmlessness of the method, the rapidity with which sleep may be obtained, and urges that it be given a place in surgery.

Benjamin Howard[20] says that "centuries ago" the Japanese used in celiotomies a narcotic mixture which contained *Datura alba,* aconite, etc.

In *gynecology and obstetrics* hardly a ray of scientific or rational light penetrated until modern times and civilization came to lighten the burdens borne by women of pain and superstition.[21] M. Weiss[22] says that the relation between *menstruation and ovulation* was known to the writers of the Talmud (vide Nida, 8, 1). Contrary to the Mosaic teaching, an intact or an injured hymen was not held as proof of either the chastity or the fall of a virgin; for it appears they recognized that conception was possible without the least injury to the hymen (Nida, 64, 2), while, on the other hand, mention is made of the fact that disease may give rise to destruction or atrophy of the hymen.

In *menorrhagia* astringent injections, such as the juice of strawberries and their leaves, or of plantain, was resorted to, reinforced by the use of pessaries of the leaves of plantain or knot-grass, bruised and rolled in a piece of fine linen, put "up in the womb."

Uterine prolapse was treated by reduction, followed by injections of the decoctions of galls; or, in bad cases, by the use of pessaries made of cork smeared over with wax, or sometimes made of wax alone. Fissured nipples were dressed with an ointment made of powdered elder bark, grease, and wax, i. e., an astringent.

In passing from surgery to medicine, we should note that the most ancient and persistent philosophy of disease, lasting down to our own times, was that it was due to some evil principle or spirit coming into the body from the outside, and to be fought against and driven out by any means possible and powerful. The germ theory, infection and parasitism, on which our science is now builded, shows how essentially true was the old perception.

For forty years I have been repeatedly struck by the fact that all *animals hate flies* with an intensity not entirely explained by their "suctorial," stinging, or biting powers. Our domestic animals, even our draught animals, expend as much energy in keeping off the pests as they do in our service, or in getting food. Even the most pachydermatous are not exceptions. If we observe an elephant, we are astonished at his constant watchfulness and exertions in keeping off the common flies whose suctorial powers are so feeble as to be entirely out of proportion to the energy spent by the elephant. Might not bacteriology have received a hint here of service in discovering the etiology of disease? Did not Nature long ago thus find out that flies might be the carriers of disease germs? Science is now rapidly advancing toward the same discovery. The entomologist of the United States Agricultural Department, Dr. Howard, after long studies, believes that flies are often the active agents in spreading typhoid fever. The bacillus of Eberth has been found in flies, and if Dr. Howard is right, then the profession must educate the public and nurses, and so order hospital construction and service that flies shall have no access to food.

In the Talmud (Ketuba 77:2) is mentioned a disease, "Rotz," characterized by weeping eyes and a discharge from the nose and mouth (influenza?) said to be communicated from man to man, sometimes by flies! The malady is plainly and unmistakably ascribed to an animal parasite.

In the light of the importance now being attached to flies as the carriers of contagion, much interest attaches to the fact that precautions against breeding grounds for flies about camps are to be found in the Scriptures. That grand old sanitarian, Moses, found it necessary to be most explicit in the management of camps. In Deuteronomy, 23: 12-14, the old version reads: "Thou shalt have a place also, without the camp, whither thou shalt go forth abroad. And thou shalt have a paddle upon the weapon; and it shall be when thou wilt ease thyself abroad, thou shalt dig therewith and cover that which cometh from thee." The new version reads: "Thou shalt have a paddle among thy weapons," and, as a variant for paddle, gives "shovel" in the margin. The passage, therefore, means that a shovel for burying excreta immediately is a necessary implement for the members of every camp.

> In a great empire[23] no question can be of more importance than the study of *malaria.* When we speak of one of our possessions as "unhealthy" it is in terms of "malaria" that we judge it. "Of all the diseases in our tropical possessions," says Dr. Willoughby Gardner in his interesting address to the British Medical Association, "by far the most important is malaria. It undermines the health of millions, and makes vast regions which would be otherwise our richest possessions, almost uninhabitable." In India alone, it kills every year some five million people—twice as many as cholera, smallpox, plague, and other infectious diseases put together. Indeed, one is almost tempted to agree with a writer in the Quarterly who says of the malarial germ "that it has played a greater part in human affairs than the greatest politician or general that ever lived." The first step in dealing with it was the discovery by the Romans, in the dawn of sanitation, that marshes and deficient drainage had much to do with its origin.

Herodotus writes (chapters 95-6) that the contrivances which the Egyptians use against the *gnats* wherewith the country (Egyptian marshlands) swarmed are the following: In the parts of Egypt above the marshes the inhabitants pass the night on lofty towers, which are of great service, as the gnats are unable to fly to any great height on account of the winds. In the marsh country, where there are no towers, each man possesses a net instead. By day, it serves him to catch fish, while at night he spreads it over the bed in which he is to rest and, creeping in, goes to sleep underneath.

A correspondent of the *British Medical Journal* (Aug. 30, 1902) writes that in 1864 one of her majesty's sloops anchored off Ajiabambo, in the Gulf of California, "dollar hunting," and sent boats ashore, the crews of which were to proceed a short distance inland to obtain the dollars which, in those days, the Mexican government did not allow to be exported. The medical officer seeing that the country was sandy and covered with brushwood, feared that malarial fever might result with the men so employed, but was assured by a resident that there were no *mosquitoes* and that "where they do not exist there was no chance of malarial fever." The officer reported this to the medical department of the navy, but it attracted no attention.

In the fifth century, B. C., Empedocles of Agrigento is said to have freed Selinante from fever by drainage of the stagnant waters about the city. A number of Roman writers are quoted by Marchiafava and Bignami,[24] showing that marsh lands were injurious to the health of man, because of the miasms, invisible animal and insect life, emanating from them. It was suggested that the mosquito was the origin of malaria as early as 1618. The Abyssinians[25] knew where and in what months malarial diseases are most prevalent and, by acting on this knowledge, they generally succeed in avoiding malaria. When absolutely obliged to cross such places as the valley of the Mareb in the fever season, they continually explode blank cartridges and light damp fires to keep away "the fever." The Chillooks and Bongos of the Upper Nile make great fires of dried cow-dung when their herds come in at night. Thus a cloud of smoke hovers over the village and protects men and beasts from the mosquitoes. The Andaman Islanders plaster their skins with a mixture of lard and clay to protect themselves from the bite of these insects. The scientific demonstrations of the relation between the mosquito and malaria is recent, but the natives of malarial districts suspected it long ago and protected themselves accordingly.

Alexander von Humboldt[26] says some of the Orinoco tribes of natives smear themselves with red paint, "to keep off the mosquitoes, probably."

A traveler through British Honduras relates[27] the following incident:

> One trifling incident will cause me to remember the negro colony at Tambol. In the Peten I saw a few cases of the disease called "pinta" which seems to be a dystrophy of the body pigment. It leaves the skin colorless or apparently white in blotches. Face, limbs, and body are liable to attack. Not only is it probably congenital, but it may be acquired by contact. On this particular evening the air was full of mosquitoes, and as we sat in the hut a man covered with the pinta blotches came to the door and would have entered, but the Carib woman drove him away, explaining her conduct by saying: "Signor, it is very bad that the mosquitoes that bite him should bite us. We catch pinta, tombière!" The mosquito is here re-

> garded as the disseminator of all manner of diseases, especially the pernicious fever of the tropical coast. So, the science of the natives is not so very far behind the times.

Indeed, the historic foreshadowings of the theory of the microbic origin of disease are too numerous to gather here. But more than to any other we owe to Pasteur the discovery of the microbic origin of contagious diseases—and Pasteur was not a medical man, not even a physiologist; he was simply a chemist. By his researches as to the origin of silk-worm disease, of charbon, or splenic fever, of chicken cholera, etc., he laid the foundations of preventive medicine, a branch of science which is, beyond question, the greatest benefactor of civilization.[28] His work on rabies must also not be forgotten.

The *Quarterly Review* of July, 1899, says that the prohibition of pork among the Israelites and Mohammedans probably arose from the danger of *Tænia solium* and *Trichina spiralis;* and the general use of hot drinks, like tea in China, was probably based on acquaintance with the ill effects that may result from the use of polluted water. . . .

And, as to *immunity,* natural and acquired, there have long been suggestions of the truth in the habits of animals, and in human life everywhere. Old citizens of rattlesnake countries know of dogs which are not only fearless but which find their chief pleasure in hunting these snakes. Having been bitten and escaped death after their first experience, they become thereby immune, and thereafter progressively so with each fight. It is strange no physician ever realized the significance of the fact.

S. Weir Mitchell[29] says that it was an astronomer (Galileo) who gave us the first rude *thermometer,* and it seems to have been another, Herman Kepler, who first and certainly before 1600, *counted the human pulse,* or, at least, left a record of having done this memorable thing. Does it not, Mitchell asks, seem incredible that of the numberless physicians who sat by bedsides, thoughtful, with fingers laid on that bounding artery, none should have had the idea of counting it?

It is strange that physicians should have waited until 1858 before seeing the use of the thermometer in medicine. In that year Wunderlich first described and urged its use, although the writings of Newton and Franklin show that it had been used long before for ascertaining the temperature of the human body. It was such a curiosity that one, about a foot long, is said to have been exhibited, less than 45 years ago, at a meeting of the British Medical Association by Sir Samuel Wilks, exciting curiosity and levity.

K. N. Macdonald[30] says: "*Inoculation with smallpox virus* has been practised by the Burmese from time immemorial. Among them, smallpox was called the inevitable disease, because of their idea that it is rooted in the human body from the time of birth. The usual procedure in inoculation is to mix the virus with milk and insert it under skin of the arm."

Immerman[31] claims that accounts of the inoculation of human smallpox may be found in the records of the most ancient times. Long before the beginning of our chronology, variola was purposely inoculated as a prophylactic measure in Hindoostan and China. In the latter country, the method never progressed beyond clothing the individual to be inoculated in a shirt impregnated with variolous pus or stuffing dried smallpox crusts into their noses. These measures frequently failed and they still more frequently led to violent variola. It is probably true, however, that in China the method never progressed further than this. In Hindoostan, on the other hand, the priests traversed the country in the spring of every year, and the virus was introduced by means of scarifications made on the outer surface of the arm or forearm, 15 or 16 in number, one-half inch long, and parallel. This area was then covered with a compress of cotton wool impregnated with the virus and moistened with the water of the Ganges. In addition to Hindoostan and China, with their primitive methods, it has been established that prophylactic inoculation was practiced by the inhabitants of Barbary and Senegal in Africa, and by the Circassians and Georgians in Asia before it crossed the Bosphorus.

Immerman[32] says that the fact that the so-called *vaccinia* (cowpox) was capable of transmission to the human individual has been known for an indeterminate period of time. Long before the days of Jenner it had been observed that individuals who had never had smallpox, but who had accidentally been infected with cowpox, remained immune when subsequently exposed to variola. Alexander von Humboldt, for example, says that since the earliest recollection of man, certain tribes of Indian shepherds in the Mexican Corderillas had been thoroughly convinced of the protective effect of vaccinia against variola. Brun makes a similar statement in reference to the clan of Elihats in Beluchistan. The belief in the immunizing effect of cowpox was also prevalent among the country and dairy folk of Europe and thoroughly rooted in certain parts. The tradition brought, by a dairy maid, under Jenner's notice, was widely spread in all the dairy districts of England and Ireland; it was prevalent in as many as 18 English countries.[33] Benjamin Jesty, a farmer of Dorsetshire, England, was probably the first person in Europe to *vaccinate with bovine virus for prophylactic purposes.*

The material relating to Jesty has been set forth by Crookshank in his work on the "History and Pathology of Vaccination," and it has been summarized by Dr. McCrae in the *Johns Hopkins Bulletin* for February, 1900, his article being illustrated by Say's engraving of Sharp's painting.

> Benjamin Jesty[34] was born at Yetminster in Dorset, and was a farmer who moved to the farm of Downshay in the Isle of Purbeck, near Swanage, in Dorsetshire. He appears to have been an eccentric man, full of quaint actions and speech, but with good power of observation and of sensible reflection on what he had observed. In 1774 smallpox was prevalent in his locality. He was thought to be in no danger of it himself, as he had already acquired cow-pox, which he had contracted accidentally from the cows. Some of his famly were not so protected, and the fact that two of his maidservants, who had previously had the disorder from the cows, attended patients suffering from smallpox without infection, seems to have determined Jesty to inoculate the cow-pox into his own family as a preventive of smallpox. Accordingly, Jesty carried out his ideas and inoculated his wife and two sons, aged 2 and 3 years, with the cow-pox. The patients went into the fields and the virus was taken on the spot from the teats of the cows. A stocking-needle was the *instrument used*, Mrs. Jesty being inoculated under the elbow, the sons above. The latter had the disorder in a favorable way, but in the course of a week Mrs. Jesty's arm was much inflamed. She had fever, and was so ill that a neighboring surgeon, Mr. Trowbridge, of Cerne, was called. He said: "You have done a bold thing, but I will get you through it if I can." She soon recovered perfectly, but the boldness and novelty of the attempt produced no slight alarm in the family and no small sensation in the neighborhood. Fifteen years later, in 1789, the sons were inoculated for the smallpox by Mr. Trowbridge along with others who had not had the cow-pox. The arms of the Jestys inflamed, but the inflammation soon subsided, and no fever or other variolous

symptoms were observed, while the unprotected individuals went through the usual course of inoculated smallpox. Subsequently Mrs. Jesty and her sons were often exposed to smallpox without taking it, while in 1805 one of the sons was again inoculated with a negative result. In 1805 the Jennerian Society persuaded Jesty to come to London for five days for the purpose "of taking your portrait as the earliest inoculator for cow-pock, at the expense of the institution; you will receive fifteen guineas for your expenses." He came and his portrait was duly taken, but he conceived a very unfavorable opinion of the metropolis, though he admitted it possessed one great merit, namely, that he could be shaved every day. He died April 16, 1816, at the age of 79, and he is buried in the little village churchyard at Worth Maetravers.

I can not forbear admitting that this magnificent act of Jesty has never been rated at its true value. That Jesty was a layman does not detract from the honor that is his due, but, to my mind, adds to it. Neither Jesty nor Jenner discovered the fact of immunity from vaccinia, and neither could explain it. That Jenner waited 25 or 30 years after the dairy folk had found the truth, and 22 years after Jesty vaccinated his family, before he vaccinated the Phipps boy, is not a reason for making Jenner the discoverer of vaccination. That honor seems to me to be due to Benjamin Jesty.

It appears[35] that the Chinese have long observed the association between the death of *rats* in the house and the appearance of a case of *plague* a few days later in the family living there. J. Campbell Gibson[36] directs attention to the fact that the disease which preyed on the Philistines, described in Samuel I, chapter v, vi, was bubonic plague, and that they recognized the dependence of the spread of this disease on rats (or mice as the text has it); the Philistines (who thought to appease Jehovah by sending back his ark) sent, at the same time, as guilt offerings, golden images of the tumors, the chief symptoms of the disease in those cases which were not fatal, along with golden images of mice. The importance they attached to this relation is plainly shown by referring to the Septuagint, wherein the tumors are spoken of as "plague boils," and it goes on to say "in the midst of the land thereof, mice were brought forth, and there was a great and deadly destruction in the city." The description of the disease is quite clearly that of bubonic plague; the recognition that mice were responsible is very interesting.

"Among the means of protection possessed by the living organism against infectious diseases and toxic agencies, laboratory investigation has placed the *bile;* but, as is true of so many other facts in medicine, empiric knowledge anticipated scientific discovery.[37]

It appears also that, from time immemorial, the peasants of central France have been in the habit of using the gall bladder as a remedy for viper bites. They seem to have anticipated the interesting and valuable experiment of Phisalix, Neufeld and Valée and others concerning the antitoxic properties of the hepatic substances. In the *Revue Scientifique* (Feb. 23, 1901) a correspondent adds this statement: "The natives of Bengal are not alone in knowing the antitoxic power of the liver and in employing it therapeutically. Although Professor Frazer of Edinburgh first showed by scientific experiment that the bile of the serpent is an antidote against the venom of that creature, the natives of Guiana[38] have, for years and years, treated poisonous bites with a powder composed of the liver and bile of the serpent. Moreover, in California, the Indians do the same thing.[39] And at our watering places to-day[40] one may see fishermen treat stings and pricks with a plaster of fish liver. It is interesting that such practices, scattered here and there, all over the globe, among the most diverse peoples, are not at all so irrational as might at first sight be thought. They are justified by the brilliant studies of Frazer on the action of the bile against venom, by those of Frantzius on the action of bile against the virus of rabies, and by those of Vicenzi on the action of bile against the virus of tetanus.

In *materia medica and therapeutics* our modern knowledge and methods of treatment are often accretions of the ages, and sometimes precisely those of the earliest times.

R. H. True[41] says that less than two dozen of the botanic drugs now in use, have been introduced during the century just closed. He defines "materia medica as that body of substances which, in the popular belief, possess efficacy as remedies, although no confirmation has been offered by science. Indeed, science has often merely put its official stamp on folk beliefs in producing our present materia medica." "The beginnings of our present materia medica antedate the most ancient papyrus or inscription. It seems to have had its beginning in Egypt, Phoenicia or India. There is even a hint of our modern hemotherapy, as arterial blood, dried and powdered, is sometimes used as a restorative."

The Talmud "pharmacopeia"[42] shows that there were used infusions, decoctions, draughts, wines, vinegars, syrups, liniments, cataplasms, blisters, ointments, electuaries, plasters, powders; also cathartics, emetics, tonics, sudorifics, expectorants, abortives, hemostatics, astringents, poultices. The following substances also receive individual mention: Wine, vinegar, honey, whey, cotton seed, walnut and olive oil, garlic, mustard, pepper, coriander, ginger; also ox-gall, calamus, aloes, myrrh, mint, cotton-plant, hyssop, thyme, broomtop, poppy, acacia, mandragora, mandrake, mush, mercury, soda, borax, alum, iron, copper, lead and yellow arsenic.

S. S. Cohen[43] observes that the use of *Passiflora incarnata* is not original with the medical profession, and goes on to say that Benjamin Rush told his students that they could learn many useful methods of treatment even from "quacks and old women." There is much that may be learned of drug-therapy from irregular practitioners whose crude reports of uncritical observations frequently contain accounts evidently truthful of trustworthy experience.

The use of *light as a curative agent* is said to have been discovered by accident and by laymen. In a communication to the Academie des Sciences, Dr. P. Garnault tells of his success in the use of light in the treatment of rheumatism and other diseases. His attention was first drawn to the subject by M. Trouve, who observed that a workman afflicted by rheumatism was completely cured by remaining in the vicinity of an intense arc-light used for an electric fountain, and, subsequently, that in works employing electric soldering, in which there is a great effulgence of light, workmen had ceased to be affected by such diseases as rheumatism and gout.

Another version is given by *The Practitioner* as to the light treatment of lupus:

> Four or five years ago (so runs the story) a watchmaker of Berlin was the subject of lupus of the face, for which he had been treated in the clinic of Professor von Leyden at the Charité Hospital. As the condition did not improve, the patient left the hospital and resumed work. He was in the habit of using lenses of high power. One day, whilst examining the inside of a watch, he was standing close to the window. The rays of the sun passed through the lens, the focus of which happened to be on a part of the man's face affected by the

disease. He felt a sharp pain, and on looking into a glass he saw that the burnt spot had become white. He repeated the experiment on the following days, keeping the lens sometimes for hours between the sun and the ulcerated places. In six weeks cicatrization had taken place, and the patient went to show himself to Professor von Leyden, who had declared that the disease was incurable.

"It is a fact that some of the greatest advances in medical treatment have been due to outsiders. But even if it be true that the watchmaker did discover for himself that lupus could be burnt with a lens, the fact can not detract in the least from the merit of Professor Finsen's achievement in working out the rationale of the process and the details of the method. The account of his experiments, given in his little book on 'Phototherapy,' which has been translated into English by Dr. Sequeria, of the London Hospital, is an admirable example of scientific method."

The writers of the Talmud[44] understood *massage with oil inunctions; diaphoresis* by means of warm baths; and, most noteworthy, *venesection* for plethora and quinsy! (See Joma, 84, 1.) The *therapy of water* was also crudely understood (Sabb. 78, 1). Even *hypnotism* was resorted to, but without any appreciation of its real nature. By laying on of hands, hysterics were cured of blindness, paralysis, hysteromania, and catalepsy (Joma 84, 1).

The routine treatment, says Anders, of *intermittent and remittent fevers* by the Winnebago and Dakota Indians is an emetic or cathartic, followed by a vapor bath in the sweat house and then a cold plunge. The after-treatment consists in a tonic made by decoction of the willow. In *rheumatism* they rely almost wholly on the vapor bath, also the black cohosh (*cimicifuga*) in decoction, treatment hard to improve on to-day.

For *mucous enteritis* and *dysentery* they rely entirely on decoction of buttonwood bark (or American sycamore), which Anders says is singularly effective in their hand. They also use *Geranium maculatum* (cranesbill) successfully in *diarrhea*.

H. M. McClanahan,[45] who lived among the Gros Ventres and Assiniboine Indians, says they have learned by observation that it is necessary that the skin, bowels and kidneys should perform their several duties. They induce perspiration most effectually by means of their sweat houses. These are about 4 feet high, 8 feet in diameter, and sunk one foot below the level of the ground. In the center of the dug-out, which is covered almost air-tight with blankets, are placed very hot stones, over which hot water is poured, and the occupants of the bath thus get a steam bath. (Observe how the Turkish bath is foreshadowed.) Then, unless it be freezing weather, the bathers go from the bath to the river and plunge in. To produce catharsis, they sometimes resort to abdominal kneading to excite peristalsis as we do to-day. In suppression of urine, small heated stones are placed under the patient's back, failing in which the steam bath is resorted to. Recognizing that an unarrested hemorrhage means death, they use compression and spider's web, the latter to favor clotting of the blood.

R. H. True[46] says that in the seventeenth century, the wife of the governor of one of the Spanish colonies (Peru), west of the Andes was attacked by malarial fever, and seemed likely to die. The natives gave to a Jesuit missionary, who worked among them, bark from a certain small tree, telling him to grind it up and give it to the countess at regular intervals. She recovered and, being of a philanthropic disposition, obtained a quantity of the powdered bark and sent it to Europe for use among the poor. In due time, the trees and plants were botanically investigated and named by Linnaeus, in honor of the house to which the countess belonged, "Cinchona."

The Aconitum[47] of the Greeks and Romans refers in all probability to the *Aconitum napellus*. The ancients were well aware of the poisonous properties of the aconites. It was used by the ancient Chinese[48] as an arrow poison, and is still in requisition among the less civilized of the hill tribes of India. Something of the kind was in vogue among the aborigines of ancient Gaul.[49] "The use of *buchu leaves*[50] was learned from the Hottentots by the colonists of the Cape of Good Hope." At a very ancient date *camphor* seems to have been a well-known medicine among the Chinese, and *menthol* among the Japanese.

Coca leaves[51] were cultivated by the Incas prior to the Spanish invasion for use on long journeys, to ward off fatigue. This fact drew the notice of Europeans and the discovery of coca and cocain resulted. W. G. Mortimer[52] states that there is a custom among the Peruvian natives of opening old graves for the purpose of recovering sacred relics. When these old graves are opened, although there is no apparent odor, those who explore them are very apt to get a sore throat from inhaling the vapors or impalpable powder into which the bodies fall as they are exposed to the air. It has long been a custom to fortify against this condition by the use of coca, thus illustrating the intuitive adaptation of a native remedy empirically which it has required long years of study to apply since in a scientific way in the treatment of throat troubles.

Zelia Nuttall[53] takes the following from an unpublished manuscript in the Royal Library at Madrid on the customs of the ancient Mexicans: "Inflammation of the gums is cured by lancing them with an obsidian knife and rubbing in a little salt with the finger. Or heat a red pepper or capsicum and press it along with a grain of salt as tightly as possible on the painful spot. If these remedies do not suffice, draw the tooth and put a little salt into the hollow place." It is certainly interesting to find, in ancient Mexico, the employment of the modern *capsicum* toothache plaster, and to realize that centuries of experience had taught the natives the value of capsicum as a counter-irritant and of salt as an antiseptic.

There is no doubt that the use of *collodion* as a flexible antiseptic dressing is foreshadowed in the way these same Mexicans burned wounds (cauterized them) and then covered them with the melted juice of the *ulli plant*—the india rubber plant. All this was prior to the Spanish Conquest.

Curare, under the various names of curara, woorara, wourali, etc., was used by the natives of Demarara and the valley of the Amazon to poison their arrows. T. L. Brunton[54] says that an animal wounded with one of these arrows soon lags behind the rest of the herd, and quietly dies without any sign of suffering, appears, indeed, to go quietly to sleep. After the animal was apparently dead, however, it was found by Europeans whose notice was drawn to the subject that the heart could be felt beating vigorously for a considerable time, and if an artery were cut across the blood was ejected forcibly from it. It therefore occurred to Sir B. Brodie in 1812 that if he could keep up the respiration until the poison was eliminated the animal could be saved. This was done, and a most valuable agent for physiologic experiment discovered.

The forerunner of *tannic and gallic acid* as applied to hemorrhages may be found, according to Dr. D. Mitchell,[55] in the use made of the decoction of oak-tree leaves in hemoptysis.

Jaborandi leaves,[56] collected in the Amazon Valley, first attracted the attention of explorers by its use in the hands of natives as a remedy for snake bite.

The *Kola nut* is made of much use by the African natives, who attribute to it divers medical properties. For instance, the nuts are used for their stimulant sialagogue and stomachic properties. The Africans[57] chew them, much as the Brazilians do coca; and ascribe to them quite as marvelous effects. These latter are found to be almost wholly due to the caffein which is present in the proportion of about 2 per cent.

A decoction of willow bark[58] was used by the American Apache Indians for intermittent fever. Our *salicin* is derived from this source to-day.

Strophanthus,[59] a remedy now widely used for heart troubles, was first brought to the notice of explorers of equatorial Africa as a very deadly arrow poison, so deadly as to paralyze the heart by means of the smallest wounds.

A. J. Currie says that Pliny (xxiv 9) gives numerous instances of the use of herbs by the ancient Celts,[60] e. g., hyssop for diseases of the eye. Broom-top, juniper and foxglove have long been known as remedies for dropsy, and, in suitable cases, with good results. For the cure of "white lights," an old Scottish name for pulmonary tuberculosis, nourishing food and fat substances were found to be of great vaue. *Oil from the blubber of the seal* was recommended.

About the time of Herodotus[61] the acquaintance of the lay people with simples appears to have been considerable; for example, the diuretic powers of *squill* in hydropsic complaints and the effects of the salts of *iron* on disorders arising from a want of proper tone in the system.

Dr. Justus Sinexon of Philadelphia (personal communication) in the forest of northwestern Maryland observed the guides eating *May apple* and chewing with it birch leaves to prevent griping. Dr. E. W. Kelsey of Philadelphia (personal communication) during his stay in the Klondike, found that the Alaskan natives used a decoction of *green fir boughs* as a remedy for scurvy.

In many instances the extraction of the essential principle of the plant which was first discovered by the nonmedical was made by chemists who were not physicians, and who derived their zeal for research from pure science rather than from therapeutics. This is especially true of the alkaloids, among which are atropin, brucin, cathartin, cinchonin, cystisin, delphin, digitalin, emetin, gentianin, lupulin, morphin, narcotin, picrotoxin, piperin, rhubarbarin, scillitin, solanin, strychnin, veratrin.[62]

E. T. Williams[63] states that, so far as we know, Moses was the creator of preventive medicine, an idea thought to be peculiarly modern. From whatever source the fragments of his system may have been derived the system was his own and that of the Powers which guided him. The notion of promoting health by preventing sickness was the foundation stone of the Jewish sanitary legislation. The prohibition against pork, considering the heat of the climate and its liability to be diseased, must be considered as a safe provision, especially in the light of present-day histology and trichinosis. The laws concerning "issues" or discharges from the genital organs, both of men and women, display similar wisdom. The laws concerning leprosy were strict. Every suspect had to present himself to the priest. If the diagnosis was doubtful, he was shut up for a week or two and then reexamined. Articles of clothing worn by lepers had also to be submitted. If found diseased they were burned. If doubtful they were washed and re-examined at the end of a week, when they were either burned or pronounced clean. When the walls of a house were attacked the affected parts had to be torn down and carried to a refuse heap outside the city. The remainder of the wall was thoroughly scraped, the scrapings themselves being carried out of the city and the broken places rebuilt with fresh materials. If these means proved insufficient the whole house was demolished and the debris removed from the town. Modern science may have discovered simpler methods of disinfection, but certainly nothing more thorough or effective. The object of circumcision is nowhere stated in the Bible. It probably does good by (1) reducing liability to venereal diseases; (2) as a preventive of masturbation; (3) by preventing phimosis and paraphimosis, and (4) it probably promotes continence by diminishing the pruriency of the sexual appetite.

Medicine, W. C. Bitting[64] says, never was a science among the Hebrews. Before the Exodus the hints of medicine are very scarce. For 430 years, however, the Hebrews were in bondage to the most enlightened people of the world. Herodotus (ii, 84) says of the Egyptian physician: "The medical practice was divided among them as follows: each physician was for one kind of sickness and no more; and all places are crowded with physicians, for there are physicians for the eyes, physicians for the head, physicians for the teeth, physicians for the stomach, physicians for internal diseases." Obstetrics among the early Hebrews was left entirely to the midwives (Genesis xxxv, 17). Ophthalmia with resulting blindness was not uncommon (Lev. xix, 4—Deut. xxvii, 18); leprosy was known in all its forms (Lev. xiv, 3—xxvii, 4—Numb. xii, 10, etc.); apoplexy cut down its victims (I Saml. xxv, 37); consumption thrust its ghastly symptoms into family life (Lev. xxvi, 16—Deut. xxviii, 22—Is. x, 16); rheumatism and gout twisted the joints of high livers and perplexed men as much then as to-day (II Chron. xvi, 12—Jno. v, 2, 3); epilepsy threw men into foaming fits (M. R. xix, 17—Luke ix, 38); atrophy of limb produced deformity (I Kings xiii, 4-6—Matthew xii, 10-13). In the matter of treatment, the materia medica was scanty. Balsam (Jer. viii, 22—xlvi, 11) was a favorite drug for external application, probably effective because it was a terebinthinate and therefore antiseptic. Wine because of its alcohol was also an antiseptic.

Purging was in vogue (Prov. xx, 30). Music was used to quiet Saul in his spells of acute mania (Sam. xvi, 16), which is quite in advance of many of our methods of to-day.

Moses[65] seems to have had great knowledge of medicine. In the book of Leviticus (xiii, 3-20) we find his three cardinal principles which to-day are utilized in the management of contagious diseases, namely, differentiation, isolation and disinfection. In Leviticus iv to xxvi one can not but be struck with the directions for preserving individual and public health; the selection of portions of creatures for sacrifice and rejection of those parts of the economy whose functions are the removal of impurities or excretions; the disposal of filth in such manner that it might contaminate neither air nor water; the disposal of the dead; disinfection and purification of clothing and dwellings, and the laws of quarantine.

In hygiene, says Bitting,[66] the Mosaic medicine is supreme. The priests were skilled in preventive medicine.

It was their duty to inspect and enforce sanitary arrangements. The history of the Hebrew race is singularly free from epidemics. Diet was carefully regulated. Pork was forbidden. To eat blood was a crime. Everything had to be washed before being cooked (Mark vii, 4—Lev. i, 9). Bathing was compulsory on those who had touched a leper, or those with any issue or flux (gonorrhea) or who touched anything that the diseased had touched (Lev. xv, 1-13), all men and women after copulation, women after menstruation—indeed, they ought to have been the cleanest people on earth. No doubt their freedom from venereal disease was due to these precautions added to the cardinal one of circumcision.

The sick were isolated as far as possible (Lev. xiv, 33-45). The lepers were kept outside camps and cities and away from the highways (Lev. xiii, 45, 46); the house in which leprosy originated was entirely demolished (Lev. xiv, 33-45); a little loss of real estate was cheerfully suffered rather than endanger the public health.

The camp sanitary regulations were the very best. Every man was his own scavenger. All refuse from the slaughter of animals was burned outside the camp (Ex. xxix, 14—Lev. iv, 11—viii, 17). Even the very spoils of war as well as the soldiers were to be disinfected before entering the camp after battle (Numbers xxxi. 21-24). What was not inflammable must be bathed in fire to cleanse it and everything else had to be washed in water.

From the Mishna (or Jewish traditions)[67] we learn how carefully all unclean things were removed from the vicinity of Jerusalem and the temple; and the investigations of Signor Perotti in that ancient city have revealed how complete were the systems of sewers and the means of sewage precipitation and disposal.

The Egyptians, says Herodotus (Vol. ii, Chap. 42), were particular in preventing anything remaining above ground which by putrefaction could taint the air; and this was the reason of their obliging every town to embalm whatever died there. . . . . To pollute the Nile with dead carcasses would have been in the highest degree inconsistent in a people so particular on this point. The Persians, Herodotus tells us (Vol. i, Chapter 139), never defile a river with the excretions of their bodies, nor even wash their hands in one; nor will they allow others to do so, as they have great reverence for rivers.

Herodotus tells us (Chapter 188, Vol. 1):

> The great king, Cyrus, when he goes to the wars is always supplied with provisions carefully prepared at home; and with cattle of his own. Water, too, from the river Choaspes (the modern River Kerkhah) is taken with him for drink. Wherever he travels he is attended by a large number of 4-wheeled cars, drawn by mules, in which the Choaspes water, *ready boiled for use and stored in flagons of silver* is moved with him from place to place.

The Greeks were evidently familiar with the purifying nature of *sulphur*, for Homer makes Ulysses say:[68] "Bring me, old woman, sulfur—the remedy for impurities—and bring me fire that I may fumigate the palace."

From all of these instances, and more that might easily be added, it would at first seem as if the discovery of new medical truth were almost hopeless. So much of our new knowledge is old, so much not true, that the common practitioner feels discouraged in any attempt to make additions to the existing body of truth. But to me, the lessons of these things cited are most encouraging, and should inspire the simplest mind with hope.

1. The plainest moral to be deduced is that a large deal of the ancient wisdom is really wisdom. It has been an egotistic habit to republish the nonsense and quackeries and superstitions of medical history as conceited proofs of how superior we are to our forbears. This was as foolish as it was untrue. We are not so mightily superior as we think. When we are really so we shall not boast nearly so much. Neither have we by any means learned all that the ancients and barbarians have to teach us. Modern armies and cities could still learn a great deal from Moses, one of the greatest men, and certainly the very greatest sanitarian of all history. And just at the present time one can not help feeling that the old, unused truth is often of more importance than the new one. The death rate is twice as high as it would be if we should give society the benefit of the medical truths discovered long ago, but which in our rage and race for new discoveries we have disregarded. We most urgently need the rediscovery and the practical use of the old truths. My own specialty, ophthalmology, has literally gone to seed, especially in the old countries; and there is no new discovery in any department of medicine of late years that will to a small degree lessen human suffering as would a rediscovery of astigmatism and a practical utilization of its relief.

2. It is remarkable that savages and barbarians have learned so many great medical truths and are so successful in the treatment of their diseases. With all their neglect, superstition, ignorance and crudity they have managed to get hold of many important verities, especially in things that do not appear on the surface of their lives, and are not observed by the superficial traveler. If our explorers were only medical men, or even if they were alive to the great need of accuracy and thoroughness in reporting facts of medical and hygienic value, we would learn much more than we have from them.

3. We are also incited by our illustrations to a more keen observation of the common people about us, even of old women and quacks. Even these have their uses, and are not altogether without perception of medical facts. No less a person than Professor James of Harvard College (and he was educated as a physician) opposed the passage of a medical practice act in Massachusetts, because he thought it might prevent the discovery of new medical truths by the people. I think he was ludicrously stupid, but he does not think so. There is nowadays little danger of the loss of new truth by the elevation of the educational standards of the medical profession. Genuine education teaches us that undiscovered truth lies all about us, and that the lowliest may not be scorned. Every eager and genuine student must necessarily be a discoverer. No disease has been exhausted. It still has secrets, and we should not fear the silly sneers of the over-self-satisfied, who rail at empiricism, for empiricism has given us our most valuable discoveries in medicine.

4. And the method by which we are able to make these discoveries is by careful and accurate observation. We must, in a way, exemplify in medicine the method of Sherlock Holmes, or better, of Zadig, as deduced from Voltaire's story by Huxley. We are prone to leave this method to the professional scientists and discoverers—and even, alas, to the quacks and scamps.

The striking lesson also appears that only by the unifying and systematizing power of modern science do the single and scattered discoveries of the world become of use to all. In all the instances cited it will be noted that prior to the rise of modern science no one people had the benefits of the discoveries made by others. Each was held in the bondage of medical barbarism, because whatever single or discrete truths were known the great mass of truths were not known, and so there was no grand or general progress. By taking all that was good in all parts of the world and systematizing them to a common beneficence our science has at a stroke already largely lifted the world out of its course of disease and is every day lowering the death rate, which is, as it were, the thermometer of social welfare, more and more rapidly.

"One of the greatest losses in medicine," says T. Lauder Brunton,[69] "is the loss of individual experience. Men, most able and successful in the practice of their profession, die and carry their knowledge away with them. Some men record the cases they have seen, but comparatively few are able to record their experience in such a way as to make it thoroughly available for others. Science takes each contribution and gives it to all." An admirable example, further continues Brunton, of the application to medicine of the method of "tracking" (method of Zadig) used to be told by Dr. Milner Fothergill:

> A surgeon, Mr. X., wishing to see the working methods of a celebrated quack, desired of the latter to be present some day at his office. The quack, much flattered that so great a man should patronize him, readily acceded to his request. Shortly after Mr. X. had taken his seat, a woman came in with a bottle of urine which she handed the quack. He looked at her, then at the bottle, held it up between him and the light, shook it and said: "Your husband's?" "Yes, sir." "He is a good deal older than you." "Yes, sir." "He is a tailor." "Yes, sir." "He lives at Scarcroft." "Yes, sir." "His bowels are obstinate." "Yes, sir." "Here," handing her a box of pills, "tell him to take one of these every night for a week, and a big drink of cold water every morning, and he will soon be all right."
>
> No sooner had the woman gone out, than Mr. X. turned to the quack, curious to know how he had made out all this. "Well, you see, she was a *young* woman, and looked well and strong; so I guessed the water was not hers. As I saw she had a wedding ring on her finger, I knew she was married, and I thought the chances were it was her husband's water. If he had been the same age as she was, it was hardly likely he would have any illness, so I guessed he was older. I knew he was a tailor because the bottle was not stopped with a cork but with a bit of paper rolled up and tied around with thread in a way no one but a tailor could have done it. Tailors get no exercise, and are therefore apt to be constipated. I was quite sure he would be no exception to the rule, so I gave him 'opening pills.'" "But how did you know she came from Scarcroft?" "Oh, Mr. X., have you lived so long in Leeds, and don't know the color of Scarcroft clay? It was the first thing I saw on her boots when she came in!"

5. And it is not only the intellectual, the learned, the laboratory worker who can discover the new or rediscover the old. There is even more chance for the busy daily practitioner if he will only keep his eyes wide open and not be swayed by custom and fashion from seeing the hitherto neglected, and from ferreting out its ignored or unsuspected significance. The method of Zadig is at the disposal of the plainest country physician. He sees or may see the facts at first hand which the laboratory physician too often is prevented from actually seeing at all. And there is a perfect reason why to the end of time the individual discoverer can never have his opportunity taken from him. It is because every organism, every patient, differs from every other in the world. The protoplasm of everyone's body differs in chemical construction from that of every other. Each master's footstep is known by his dog, its scent being different from that of every other footstep in the world. Albumin has never been correctly analyzed, never analyzed twice alike. Each patient's disease is therefore peculiar and individual. Our large classes of disease are only rough generalizations, as each nation and race will have its typical protoplasm; thus all true discoveries and treatments must be individual, and the *science* of medicine can never conquer or render negligible the *art* of medicine. When our therapeutics becomes absolute and certain each patient must be treated differently. All the general truths and theory can never discover all the truth of the individual case.

6. And not only may we in our pride unsafely ignore the lay-world, far removed in time, space or culture; we are just as wrong-headed if we think there is not a subtle and even splendid medical wisdom in physiology and pathology, in the mechanism's adaptations, the healing powers and the teleologies of the tissues and organs of all living bodies. The number of articles of our materia medica derived from the animal body is so great that I can not even enumerate them here. Much of modern medical laboratory science is an attempt to rediscover the methods Nature has taken to prevent or cure disease by secretions and devices whose intricacy and ingenuity astonish us. The advance of serum therapeutics and the use of the extracts of the ductless glands are instances.

Immunity, as we have seen, is a device of Nature. We are really only now relearning its laws and taking advantage of them. Disease in the making is often discoverable in the study of habits, for we know, although we are too prone to forget it, that function always precedes structure, and that therefore malfunction always precedes organic disease. It is a truism that every device of civilization has been previously invented and used by what in our materialistic day we are foolishly likely to call "unconscious" nature.

Viewed simply as a machine for the utilization of force, every animal body is vastly superior to man's most perfect engine. In the steam boiler and engine from one-quarter to three-quarters of the heat is wasted, and in our fireplaces and stoves about 90 per cent. In our lamps but a small fraction of the energy goes to the making of light. If we could make light as inexpensively as the glow-worm and fire-fly! If our electric machines were one-tenth as perfect as that of the electric eel!

And if this is true to the physicist, how much truer is it to the physiologist, the physician and the pathologist! The Deity of biology and of therapeutics long ago discovered the methods of cure and of the prevention of disease which we are slow in working out with our most advanced science. He calls each of us to be His co-worker!

BIBLIOGRAPHY.

1. See e. g., an abstract in the Literary Digest, May 16, 1901.
2. Denver Medical Times.
3. Ledger Monthly, 1902.
4. Magnus: Die Augenheilkunder der Alten, p. 396.
5. The Reference Hand-Book of the Medical Sciences, vol. vi, 1888.
6. According to the British Medical Journal of March 30, 1901.
7. "Outlines of the History of Medicine and the Medical Profession," by Joh. Hermann Baas, M.D., 1889, p. 403.
8. Lancet, vol. i, 1892.
9. Medical and Surgical Reporter, Feb. 22, 1879.
10. Medical and Surgical Reporter, April 23, 1881.
11. The Northwestern Lancet, 1897.
12. Le Progres Medicale, 1895.
13. The Lancet, 1879, vol. i, p. 650.
14. The Memoirs of Captain Creighton, Nimmo's Edition, p. 563.
15. Chirurgie Antique, Le Speculum de la Matrice, etc., Dr. V. Deneffe. Antwerp, H. Caals, 1902. Reviewed in Lancet, Nov. 8, 1902.
16. New York Medical Journal, Aug. 3, 1901.
17. THE JOURNAL A. M. A., 1883.
18. The Asclepiad, 1888, p. 176.
19. Arch. f. Schiffs. u. Tropen Hygiene, vol. xii.
20. Lancet, 1892.

21. Mitchell: Glasgow Medical Journal, vol. xliv.
22. Wiener med. Presse, 1898, p. 1477.
23. Says the Spectator of Feb. 9, 1901.
24. Article on Malaria, Twentieth Century Practice of Medicine.
25. The Quarterly Review, July, 1899.
26. Travels in the Equinoctial Regions of South America, vol. ii, p. 205.
27. In the New York Evening Post for Sept. 6, 1901.
28. There was a play published in 1768, called "The Devil on Two Sticks," by Samuel Foote. In it the President of the College of Physicians is represented as delivering a lecture. He says:

"Brethren and Students—I am going to open to you some notable discoveries I have made respecting the source or primary cause of all distempers incidental to the human machine; and these, brethren, I attribute to certain animalcule, or piscatory entities, that insinuate themselves through the pores into the blood, and in that fluid sport, toss, and tumble about like mackerel or codfish in the great deep; and to convince you that this is not a mere *gratis dictum*, an hypothesis only, I will give you demonstrative proof. Bring hither the microscope! . . . Take a peep. . . . Those two yellow drops were drawn from a subject afflicted with the jaundice— What d'ye see?

Last.—Some little creatures like yellow flies that are hopping and skipping about.

Hel.—Right. Those yellow flies give the tinge to the skin, and undoubtedly cause the disease; and now for the cure! I administer to every patient the two-and-fiftieth part of a scruple of the ovaria or eggs of the spider; these are thrown by the digestive powers into the secretory, there separated from the alimentary, and then precipitated into the circulatory, where finding a proper nidus or nest, they quit their torpid state and vivify, and upon vivification, discerning the flies, their natural food, they immediately fall foul of them, extirpate the race out of the blood, and restore the patient to health.

29. Transac. Congress Amer. Phys. and Surg., 1891, vol. ii.
30. The Practice of Medicine Among the Burmese. Edinburgh, 1879.
31. Chapter on Inoculation, Nothnagel's Encyclopedia of Practice of Medicine, American Edition, 1902, vol. ii.
32. Nothnagel's Encyclopedia of Practical Medicine, American Edition, vol. ii, 1902.
33. Edinburgh Review, 1899, p. 345.
34. Says the British Medical Journal of Dec. 14, 1901.
35. Editorial in American Medicine, July 27, 1901.
36. Exposition Times, quoted in above editorial.
37. The following letter of a traveler in Bengal (Revue Scientifique, February, 1901, reprinted from Gazette hebdomadaire de Med.) is of interest. He says: "Three months ago a mad dog bit six or seven men, among them two of my bearers, wounding them badly. I at once had some iron heated white hot to cauterize the wounds. But the natives looked on laughingly. 'El Sahib' said they, 'it's nothing at all; we have an excellent remedy; you shall see.' The dog ran again. One of the men seized a stick and killed him; another ripped open the abdomen, took out the palpitating liver, cut some pieces off and gave them to each of the wounded men, who swallowed them, raw and bloody as they were. 'The danger is over now,' they said. As I was incredulous they brought me a young man on whose legs were large scars. Bitten by a mad dog some five years before, this man had eaten a piece of the animal's liver and had felt no evil effects from his wound.

The case I witnessed happened in March. It is now the 3rd day of July. The wounds have healed and the men continue in good health. The natives even go so far as to maintain that if this remedy be given to a man already stricken with hydrophobia, it will infallibly cure!

38. Revue Scientifique, Feb. 20, 1892.
39. Scientific American, Oct. 7, 1893.
40. Jour. Amer. Folk Lore, July, 1901.
41. Jour. Amer. Folk Lore, April, 1901.
42. G. A. Stockwell: Ther. Gazette, 1887.
43. American Medicine, Sept. 20, 1901.
44. Weiss: Wiener Med. Presse, 1898, p. 1477.
45. Med. and Surg. Reporter, March 26, 1881.
46. Jour. Amer. Folk Lore, April, 1901.
47. Flückiger and Hanbury's Pharmacographia.
48. F. P. Smith: Mat. Med. and Nat. Hist. of China, Shanghai, 1871.
49. Pliny: Lib. xxvii, C 76, also xxv, 25; quoted by Flückiger and Hanbury.
50. Flückiger and Hanbury's Pharmacographia.
51. R. H. True: Jour. Am. Folk Lore, April, 1901.
52. History of Coca. J. H. Vail & Co., N. Y., 1901.
53. Johns Hopkins Bull., April, 1902.
54. Pharmacology and Therapeutics, 1880. Gulstonian Lectures.
55. Glasgow Medical Journal, vol. xliv.
56. R. H. True: Jour. Amer. Folk Lore, April, 1901.
57. L. E. Monnet: Therapeutic Gazette, 1885.
58. Hoffmann: Medical and Surgical Reporter, Feb. 22, 1879.
59. True: Jour. Amer. Folk Lore, April, 1901.
60. The Medical Lore of Celtic Scotland. The American Medical Journal, June, 1896.
61. W. Hamilton: History of Medicine from the Creation to the Nineteenth Century, London, 1831.
62. 1. ATROPIN. Discovered by Brandes, in the *Atropa belladonna*. 2. BRUCIN. Disc. in 1819, by MM. Pelletier and Caventou, in the false angustura, in the state of a gallate. 3. CATHARTIN. Disc. in 1820, by MM. Lassaigne and Feneulle, in the pods and leaves of senna. 4. CINCHONIN. Disc. by Duncan, in cinchona bark. 5. CYSTISIN. Disc. in 1820, by MM. Lassaigne and Chevallier, in the seeds of the *Cystisus laburnum*. 6. DELPHIN. Disc. in 1819, by MM. Lassaigne and Feneulle, in the seeds of stavesacre (*delphinium staphysagria*). 7. DIGITALIN. Thoughts of its existence entertained by MM. Lassaigne and Chevallier; *actually discovered* by M. Le Royer, in 1824, in the leaves of the *Digitalis purpurea*. 8. EMETINE. Disc in 1817, by MM. Pelletier and Magendie, in the roots of the *Viola emetica*, *Callicocca ipecacuanha*, and *psycotria emetica*, and by M. Boullay in the violet. 9. GENTIANIN. Found by MM. Henry and Caventou, in the root of gentian. 10. IODE. Disc. in 1813, by Courtois, in the mother waters *of soda*, as it is obtained from the sea-weed. 11. LUPULIN. By M. Planche, and nearly at the same time by MM. Ives, Payen and Chevallier, in the yellow matter of the flowers of hops. 12. Morphin. Disc. in 1817, by Seturner, in opium, in the state of a meconate. 13. NARCOTIN. Disc. in 1802, constituting one-fiftieth of opium, by M. Derosne, who named it opiane. 14. PICROTOXIN. Disc. by Boullay, in the *Coccus orientalis* (the fruit of the *Menispermum cocculus*). 15. PIPERIN. Disc. by Œrstaed, in *black pepper*. 16. QUININ. Disc. 1820, by MM. Pelletier and Caventou, in the cinchona. 17. RHUBARBARIN. Disc. by *Pfaff*, in the rhubarb cultivated in Europe. 18. SCILLITIN. Disc. by Vogel, in the bulbs of the *Scilla maritima*. 19. SOLANIN. Disc. in 1821, by Desfosse in the *Solanum dulcamara* and in the *Boletus esculentus*. 20. STRYCHNIN. Disc. in 1818, by MM. Pelletier and Caventou, in the *nux vomica* and the bean of St. Ignatius. 21. VERATRIN. Disc. in 1819, by MM. Pelletier and Caventou, in the *cevadilla*, white hellebore, and in the colchicum.—[From the Lancet, Nov. 15, 1902.]
63. Boston Med. and Surg. Jour., 1882.
64. Trans. New York State Medical Assoc., vol. viii.
65. J. M. Magill: Fort Wayne Medical Journal-Magazine, February, 1898.
66. Transac. New York State Med. Assoc., vol. viii.
67. J. Spear: The Lancet, 1878, vol. ii.
68. Odyssey: Book xxii, 481 and 482.
69. Lancet, Jan. 2, 1892.

THE SINGLE CUFF METHOD OF CIRCULAR ENTERORRHAPHY:

A NEW METHOD.*

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A NEW METHOD.

A consideration of the evolution in the methods of circular enterorrhaphy occurring in the past seven centuries, with the use of mechanical devices and sutures, and by the suture methods alone, is indeed interesting.

The goose's trachea of the four masters, wood canula, dried intestine, Scarpa's tallow candles, Watson's gelatin tubes, Chopart and Sabatier's prepared cardboard, later, Senn's bone plates, Paul's bone tube, Ashton's rubber rings, Murphy's button, Jessett's bone tubes, Brokaw's segmented rubber rings, the potato cylinder, the forceps of Laplace and others, the rubber bulbs of Treves, represent the progress in mechanical devices; while the Glover suture and the open treatment of the wound, Jober's method, the Lembert suture, the Czerny-Lembert, the Maunsell method, Chaput's method, the Harris method, Kummer's method and the Connell suture, represent the progress in suture methods.

Considering the multiplicity of methods now in use, by mechanical devices and by suture, leads one to conclude that circular enterorrhaphy is still in an evolutionary state, that an ideal method had not as yet been devised.

Since Richat, Richerand and Treves, in the early part of the nineteenth century, taught that union is more readily obtained between serous surfaces than between mucous surfaces or beween serous and mucous surfaces, nearly all of the methods that have since been originated have adhered to the principle of obtaining union of serosa to serosa. The Lembert suture, placed through serosa, muscularis and submucosa with the knot outside of the lumen of the bowel, is probably the most universally popular method of suturing. Yet it must be admitted that closely placed sutures of this character in pathologic states of the bowel are often defective, because of pressure necrosis. The method is slow of accomplishment, also requiring great skill in placing the sutures through the submucosa without penetrating the mucosa. Should the mucosa be penetrated, a new danger is added, that of capillary oozing. By this method a diaphragm is formed within the lumen of the bowel, lessening to some extent its caliber. All of the methods in vogue which adhere to this principle produce a diaphragm within the lumen of the bowel, and some of the late methods have added to the danger of pressure necrosis, and have contributed a new danger in placing a foreign body within the lumen of the bowel, an occasional source of secondary leakage from necrosis, ileus, perforation and peritonitis.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

Some of these later methods, however, possess the great merit of being time-saving measures, which must be recognized as extremely important in cases demanding resection of the intestine. Chaput, in 1889, developed an operation termed circular enterorrhaphy by abrasion and application, in which he coapts denuded mucous surfaces, demonstrating that permanent union may be thus obtained. Robinson, in 1891, in a paper entitled "Circular Enterorrhaphy by a New Method," demonstrated union between serosa and denuded mucous membrane. Robinson's method, as well as Chaput's, does not produce a diaphragm within the lumen of the bowel. Harris, in 1892, presented a method involving the same principles as Robinson's method, with, however, an improved technic, in that he does not use a foreign body within the lumen of the bowel. Harris has also, besides extensive experiments on the dog, applied his method to the human intestine, demonstrating sero-fibrinous union. The requirements to be met in an ideal method are:

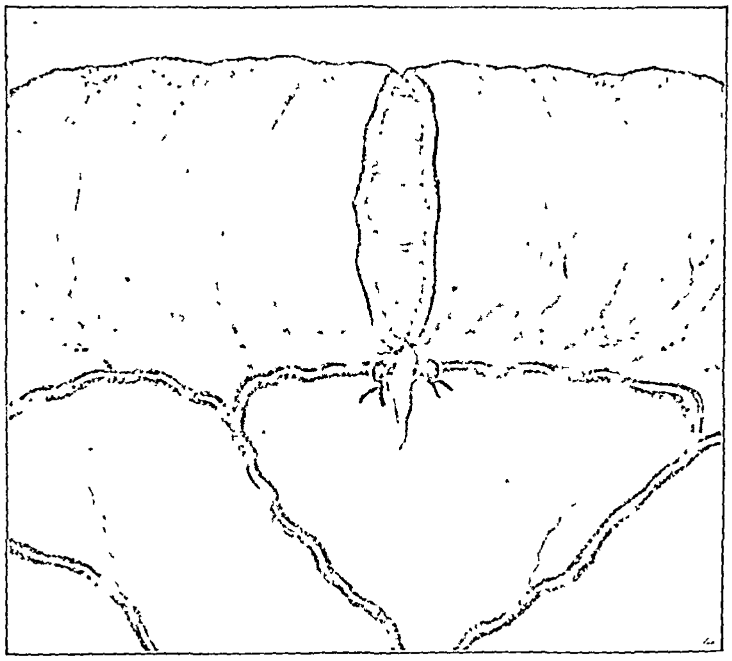

Fig. 1.—The mesenteric arteries are ligated, and a knife is passed through the mesentery and made to encircle the bowel, cutting through serosa and muscularis.

1. The union of the severed ends of the intestine by a method which provides against immediate and secondary leakage from the intestine.
2. The method must be applicable to pathologic conditions, as well as to the normal intestine.
3. Lessening of the caliber of the bowel at the site of union should be obviated.
4. Rapidity of execution.

I wish to present a method which, in my opinion, meets all of these requirements. The character of union obtained is serofibrinous.

DESCRIPTION OF METHOD.

The intestine is drawn out through the abdominal incision and its course determined. The contents of the intestine are stripped downwards and tapes or clamps applied. The mesenteric arteries are ligated. A knife is passed through the mesentery and made to encircle the bowel, cutting through serosa and muscularis. A cuff of serosa and muscularis five centimeters in length with the mesentery, is rolled back by means of gauze dissection on the distal portion of the bowel, which is well protected with gauze. The bowel thus denuded is severed at its distal end within one centimeter of the cuff. At the proximal end it is severed flush with the primary incision. Eight through-and-through sutures, the knots placed within the lumen of the bowel, unite the proximal end of the bowel to the denuded stump at the distal end.

The cuff is now rolled over the site of union on to the proximal end of the bowel and made secure by a suture placed through the mesentery close to the bowel and three interrupted sutures placed in the cuff through serosa and muscularis of the underlying bowel.

PRINCIPLES INVOLVED IN THE METHOD.

The cuff completely covers the sutures placed through the proximal end of the intestine and the stump of the distal end, so that leakage can not occur, as plastic lymph and blood agglutinate the cuff to the serosa of the proximal end of the intestine.

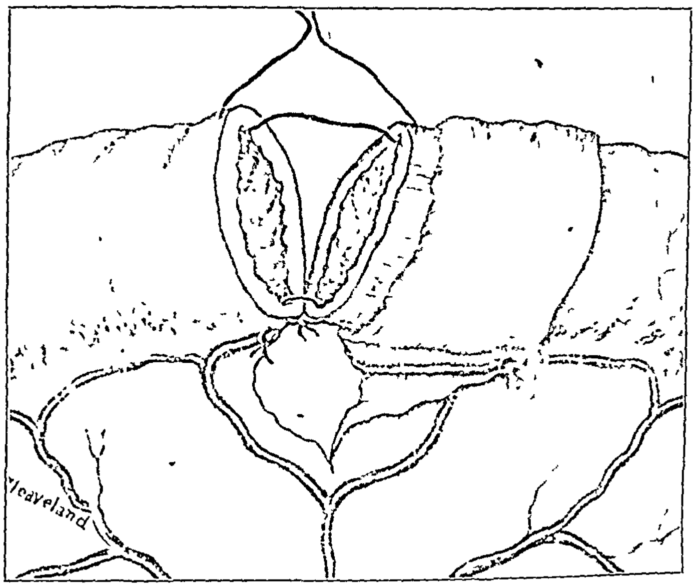

Fig. 2.—A cuff of serosa and muscularis with the mesentery is rolled back on the distal end of the bowel, by means of gauze dissection. The denuded area is severed at the distal end within one centimeter of the cuff, at the proximal end flush with the primary incision.

There can be no increase of tension on the sutures placed through the proximal end of the intestine and the stump, on the resumption of peristalsis, because of the rapid union between the cuff and the serosa of the proximal end of the intestine. The caliber of the lumen of the bowel at the point of union is unchanged.

ARGUMENTS IN FAVOR OF THE METHOD.

1. It is practical, easy of accomplishment and quick of execution.
2. It is the most natural way of uniting the severed ends of the intestine.
3. The cuff so covers and protects the sutures placed through the proximal end of the intestine and the stump of the distal end that the direct line of leakage and infection is obviated.
4. Pressure necrosis and leakage is not probable, and union is quite certain, as the blood supply to the cuff and the proximal end of the bowel that is covered with the cuff is undisturbed.

5. It is the most rapid of all methods, requiring but from five to eight minutes for its complete accomplishment.

6. It is the least complicated of any of the different methods now in use, and it can be safely performed by the ordinary surgeon, who rarely is called on to resect an intestine, quite as well as one greatly skilled in intestinal surgery.

7. Convalescence is more rapid and fewer post-operative sequelæ are likely to occur.

8. It is applicable to any part of the intestinal tract.

9. The security against primary and secondary leakage, furnished by the cuff, makes it the safest of all methods.

RESULTS OF EXPERIMENTS ON DOGS.

I will now submit a report of the pathologic findings following operation in specimens of union secured from dogs. There were four specimens examined, viz., two days, four days, eight days and thirty days, following the primary operations. The following is a report from the Columbus Memorial Laboratory, Chicago, by Prof. W. A. Evans:

Specimen 1 (The two days' specimen).—This is a piece of small intestine, with mesentery *attached.* It is 5¼ cm. long. Near the center of the specimen is a discolored area 2¾ cm. long. Four circular incisions were made, one just above the discolored area, two through it and one just below it. A circular piece showing the convexity *of* the bowel was removed *from* just about the middle of the discolored area. At this point there is about ½ centimeter between the outer and the inner circular muscle coats. A *second* longitudinal section was taken through the line of juncture between the red and white at its proximal end.

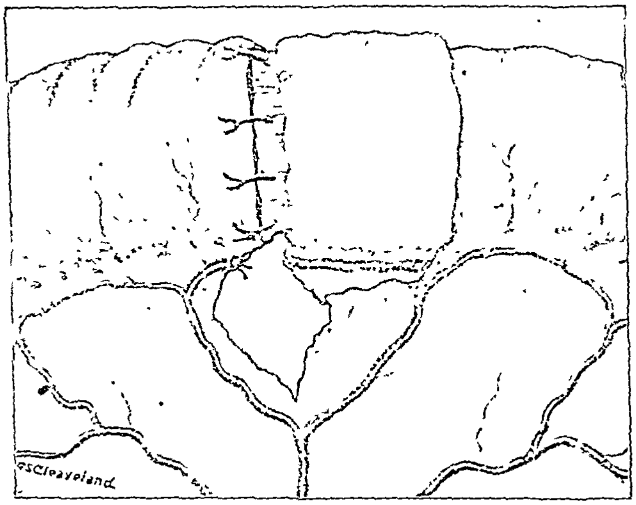

Fig 3.—Eight through-and-through sutures are placed through the proximal end of the bowel and the denuded stump of the distal end

Section A.—This is through the farther end of the cuff. Our sections are made lengthwise of the intestines. By microscopic examination we find the following: The mucous coat shows villi glands and other mucosa structures normal in every particular The muscularis mucosa is normal. The submucosa is normal It is rather thick just at the point of examination. This coat is quite thick, owing to it being the seat of a mucous fold. The circular muscle coat shows slight *infiltration* with leucocytes. The longitudinal muscle shows the same as the circular. Outside of the longitudinal muscle is a thin zone of mixed connective tissue fibers, *fibrin,* red *and* white blood cells. It is the union between the inner muscle tunic of the cuff and the serosa. It is as firm as it should be. This layer is about 1/10 as thick as the longitudinal muscle. Cuff circular coat is somewhat more inflamed than is the inner. Cuff longitudinal coat is somewhat more inflamed than the inner longitudinal. Cuff serosa does not show very well in sections.

Conclusions.—Union is good between the cuff and the underlying intestinal wall.

Section B.—This is a section made *from* near where the mucosa and the submucosa of one side was stitched to the wall of the other side. Mucosa: This coat shows villi glands and other mucosa structures. It is quite normal. At four points just on the mucosa side of the muscularis mucosa there is a moderate inflammatory reaction around the thread fibers. There are some leucocytes among those fibers. The muscularis mucosa is in two coats. In the submucosa there is moderate *inflammatory* reaction, especially along the vessel radicles. One thread is partly in this coat and partly in the mucosa.

Inner Circular Muscle.—This muscle shows one thread *puncture just about its juncture* with the *longitudinal muscle.* This layer shows a fair amount of inflammatory reaction along the vessel radicles.

Longitudinal Muscle.—This shows about the same amount of *inflammatory reaction as the circular coat.* Outside the longitudinal muscle is the layer of fibrinous adhesions. This layer is four millimeters thick as it appears on the slide. It is composed of fibrin infiltrated with leucocytes and *larger cells* with considerable perinuclear protoplasm. In this district the thread shows at several places.

Cuff.—Circular muscle fibers show considerable inflam*matory* reaction and extravasation of blood. The cuff longitudinal muscle shows *much* extravasation of blood and a fair amount of inflammatory reaction. The serosa, except for extravasated blood, is negative.

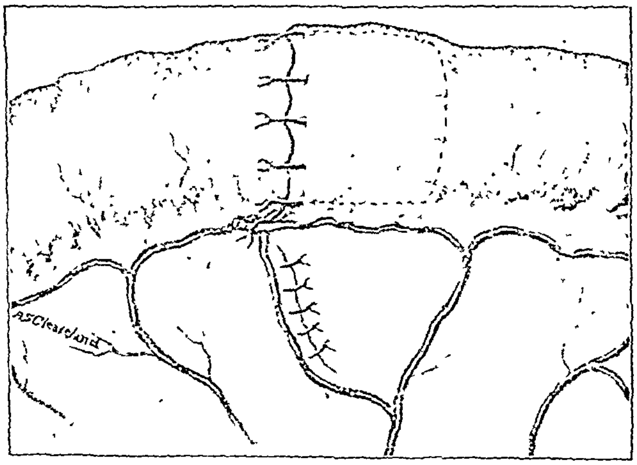

Fig 4.—The cuff is now rolled over the site of union on to the proximal end of the bowel. A suture is placed through both folds of the mesentery of the cuff close to the bowel above the anastomosing branch of the mesenteric artery, and through both folds of the mesentery of the proximal end of the bowel *Three interrupted* sutures are placed through the cuff into the serosa of the proximal bowel.

Specimen 2.—This is a piece of small intestine with partial mesentery attached. It is 8 cm. long. Length of the discolored area in this specimen is 2 cm. The incisions were made just above the discolored area, 4, 10 cm. below its upper border, 1 cm. lower down, and three other incisions *each 5/10 centimeters* apart.

Section A.—This extends longitudinally through the intestine at the tip of the cuff. The sections here show the same as in the section *marked* "Section A, Specimen 1." The photograph shows a very good union, still fibrinous, between the cuff and the underlying intestine. The other layers are about as reported in Specimen 1.

Section B.—This is a semicircular section of the convex half of the intestine near the point of union of the mucosa and submucosa, to the mucosa and *submucosa of* the unstripped end. It is mucosa. The epithelial elements of the mucosa are perfect. In the connective tissue structure of the mucosa is more *inflammatory* reaction than in any section yet examined. The muscularis mucosa is in two coats, the longitudinal coat being the heavy one. The submucosa shows considerable inflammatory reaction. The circular muscle is filled with cells of inflammation, the fibers being considerably displaced. The longitudinal muscle shows the same as does the circular. The sections are evidently beyond the point of suture, i. e., in a region not split for the flap.

Section C.—These sections are just up the cuff from the line of suture of the mucosa. They show everything shown in "B" and in addition, external to the longitudinal muscle coat, is a coat of fibrous adhesion, and outside of this are the two muscle layers of the cuff.

Specimen 3.—A piece of larger intestine than in the other specimens. The length of the piece is seventeen centimeters. The length of the discolored area is two centimeters. The bowel has been cut longitudinally just above the proximal end about 0.3 cm. below it, 0.5 cm. lower down, 1 cm. lower down, the last being outside the line of discoloration.

Sections were made as follows: A, longitudinal section through the cuff. B, the convexity of the bowel about the point of union of mucosa. B¹ near B.

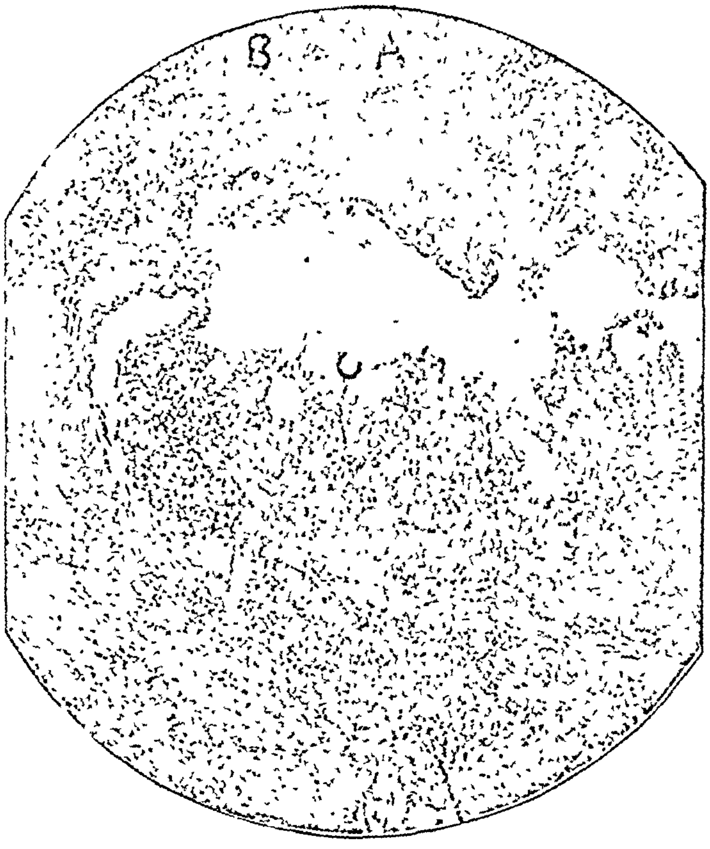

Fig. 5 —a, Mucosa b, Muscularis mucosa c, Thread.

Section A.—This is a longitudinal section near the tip of the cuff. The mucosa, muscularis mucosa, submucosa and longitudinal muscle are quite normal, showing very little inflammatory reaction. The line of union between the longitudinal muscle and the circular muscle of the cuff shows the following: The space covered is about 50 mikromillimeters. It is filled in by a loose reticular fibrous tissue. The fibers have no uniformity of direction. There are only a moderate number of blood vessels. These are young. There are many cells around the embryonal vessels The vessels that I identify as such run lengthwise of the intestine The two muscle coats of the cuff show about as much inflammation as the muscle coats of the intestinal wall. The serosa is thickened by inflammatory reaction until it is about as thick as one of the muscle coats.

Section B.—Longitudinal through the point where submucosa and mucosa of one side are joined to the intestinal wall of the other. The mucosa is perfect except for leucocytic infiltration. There is a deep V-shaped dip at the point of union, the apex being toward the muscle. Around the apex of the V runs the muscularis mucosa. The submucosa is also continuous. It is thin at the apex of the V. The circular muscle of the side is continuous and into the other. This is true of the longitudinal muscle and the serosa. The muscle coats of the other side come into the inverted V and turn up to form one of its sides.

They are joined to the circular muscle of the other side by a small amount of fibrous tissue. (The threads are knotted in the lumen and are firmly held in the wall.) All of the coats contain large numbers of leucocytes.

Section B.¹—Circular beyond the line of sutures. This shows as indicated for Specimen 2, except that there is greater leucocytic infiltration in each of the coats.

Specimen 4.—This was a piece of intestine, split longitudinally. Microscopically we do not find any evidence of the operation procedure, though this is probably due to our not finding the proper area for section. There is a heavy wall of the usual coats. One half or more of the specimen has a serous coat that shows some peritoneal thickening. The other portion is not so covered.

EXPERIMENTS ON DOGS.

I have performed 75 primary operations on dogs, with the following results: 72 dogs recovered and 3 died, a mortality of 4 per cent. The convalescence in every case was short, the dogs being in every instance turned into the general ward at the end of forty-eight hours. The following is a report of the cases that died:

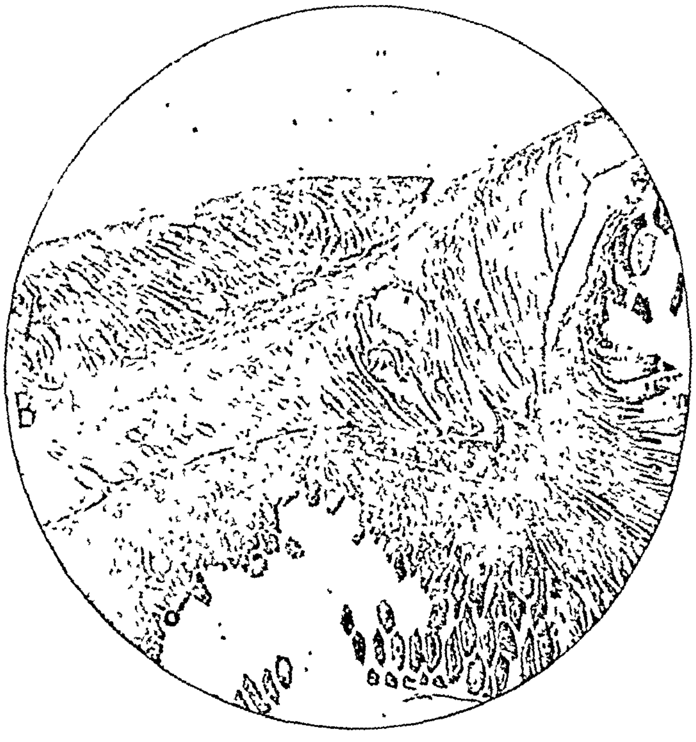

Fig 6 —a, Cuff. b, Line of union

Case 1—Dog No. 36 died five days following operation. Cause of death was general peritonitis. The great omentum was infiltrated with blood and pus, and was adherent to the cuff. Free pus was found in the peritoneal cavity. The intestines were not much distended, but were agglutinated together in several places. The site of operation showed the cuff rather dark, but union of the cuff to the underlying bowel wall macroscopically seemed good. A section of intestine involving the site of union was removed, and examined macroscopically, but no evidence of non-union was discovered. The intestine was gently distended with water, but no leakage was found. The cause of death was believed to be an infection from without, due to a faulty technic.

Case 2.—Dog number 48 died four days following operation. The cuff was distended with blood and pus, a perforation was found in the cuff in the line of union of the proximal end of the bowel to the stump, with positive evidence of leakage.

Case 3.—Dog No. 62, died thirty-six hours following operation. No evidence of peritonitis. The appearance of cuff was good, and was seemingly well adhered to the underlying bowel wall. On section the intestines were found quite well filled with blood, showing that death was due to hemorrhage.

Thirty dogs were reoperated on at periods varying from two to thirty days following the primary operation, with two deaths, a mortality of 7.5 per cent. The deaths occurring in dogs operated on at the end of forty-eight hours following the primary operation, and in each instance within twenty-four hours.

CONDITIONS OF THE CUFF FOUND.

In nearly every instance there were slight adhesions of the omentum to the cuff. The union of the cuff to the underlying bowel was good in every instance. In one instance the intestine above and below the cuff for a distance of five or six inches was adherent, making a bend in the intestine just below the cuff, but in no way obstructing the lumen of the bowel. In every respect the results were universally good.

WORK ON THE HUMAN.

I have only used this method in two cases, in the one a somewhat modified technic was followed, in the other the same technic, as above described, was adhered to.

Case 1.—Mr. B., 50 years of age, was operated on Feb. 6, 1903, for the removal of a tumor in the region of the sigmoid flexure of the colon. The tumor, with several inches of the intestine, was removed. The proximal end of the intestine, which was to be covered with the cuff, was denuded of its serosa, so that the cuff came in direct contact with the muscularis. The patient made an uninterrupted recovery. The tumor removed proved to be an adenocarcinoma.

Case 2.—Miss B., aged 20, had been operated on by the writer five months previously for the relief of chronic obstruction of the bowels, due to tubercular peritonitis. The patient was relieved of the obstruction, improved in general health, and it seemed for a time that her ultimate recovery was assured. Feb. 1, 1903, about five months following operation, she again developed pronounced symptoms of intestinal obstruction. Her condition grew worse from day to day, although slight bowel movements were secured by the use of the high rectal tube. February 12 she had stercoraceous vomiting, and a fecal discharge made its appearance in an abdominal fistula remaining from the previous operation.

Although the condition of the patient could hardly be more extreme, and but little hope could be given her of an operation benefiting her, yet she was desirous of the few chances that it might offer. The abdomen was opened in the median line. The intestines were greatly distended and very much adherent to the parietal peritoneum, and greatly matted together. The site of obstruction was searched for and found. The fecal fistula was located, the intestine just above the site of obstruction was perforated in two different places, so that it was necessary to resect about six inches of it, as it was impossible to attempt its repair. There was no difficulty in obtaining the cuff, the above described method being practiced in every detail. The time occupied for the complete resection was ten minutes. In the further liberating of the adherent intestines a large tear was discovered in a badly ulcerated area, and a second resection of probably four inches of intestine made.

The second resection was a little more difficult on account of adhesions and the extensive pathology in the mesentery; however, it was accomplished in a reasonably short period of time. The patient died at the end of thirty-six hours. A postmortem was denied, so that we can not say as to the behavior of the parts of the bowel united.

The method of operating had nothing to do with the results in this case, as it was evidently hopeless by any method of procedure. It has, however, demonstrated that a cuff can be readily formed of pathologic tissue and that the method is applicable in all cases where resection of the intestine is necessary.

REFERENCES.

Ovariotomy and Abdominal Surgery, by Harrison Cripps, F.R.C.S., Chicago Medical Recorder, September, 1892.

Transactions of the Western Surgical and Gynecological Association, 1900.

Abdominal Surgery, Greig Smith, vol. ii.

Chicago Medical Recorder, vol. xii.

Senn's Experimental Surgery, 1887.

Annals of Surgery, 1891, xiii, 427.

Treves' Operative Surgery.

INTESTINAL RESECTION,

WITH A REPORT OF SIXTEEN CASES: NINE WITH THE MURPHY BUTTON AND SEVEN WITH THE SUTURE.*

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With the exception of small lesions toward the free border of the tube, surgical repair of the intestines usually implies a resection more or less extensive, hence the title intestinal resection has seemed more nearly descriptive of the matter on which it is my purpose to elicit discussion than the more usual term "intestinal anastomosis."

Every surgeon who undertakes even cases of strangulated hernia, intestinal obstruction or penetrating wounds of the abdomen, as well as all who open the abdomen for whatever cause, must be prepared to face, often in the most unexpected manner, a resection or repair of the intestinal canal. In the vast majority of cases intestinal surgery is decidedly emergent. The urgent nature and comparative rarity of such operations in any one surgeon's practice renders a perfect technic exceedingly difficult. To skilfully execute such an operation on a moment's notice under the most varying conditions, and perhaps at rare intervals, is a severe task. These considerations lend the subject a somewhat general interest, and place it among those topics which may be frequently discussed with profit even though nothing new be brought out, every surgeon having reason to frequently review his knowledge and rehearse his technic.

The first difficulty one meets is the great multiplicity of methods and the almost endless novelties of technics and operations from which to select. With the mind so full of many theories, and the preparatory drill spread over endless ways, the operator is in the worst possible condition to meet an emergency. Have we not arrived at a point where we can stop investigating new frills and settle on the simplest procedures with advantage?

During the past six years I have had occasion to resect the intestine 16 times, as follows: For strangulated hernia, 3; for fecal fistula, 3; for sarcoma of the small intestine, 2; for carcinoma of the cecum, 2; for carcinoma of the sigmoid, 2; for intussusception, 1; for gunshot wound, 1; for injury during operation, 2. In these the Murphy button was used 9 times, with 3 deaths; the suture 7 times, with 1 death.

The somewhat prodigious number of methods for uniting the bowel may be first divided into three general classes: First, mechanical appliances, to remain in the intestine; second, pure suture methods; third, special appliances to facilitate suture, and then to be removed.

The latter class, to say the least, belongs to those things which are more ingenious than necessary. For my part I do not use them, for many reasons, one of which is perhaps quite sufficient, viz., as good work may be done more conveniently without as with them.

Mechanical means versus the suture in intestinal anastomosis is often debated pro and con. As a simple general proposition, this is manifestly unjust. Possibly all anastomoses may be made by the suture, but certainly in some localities and under some conditions a mechanical means is occasionally preferable. On the other hand, there are many situations and conditions to which mechanical anastomosis is entirely unfitted. Therefore, I conclude that the minimum of methods for good intestinal work is a good mechanical and a good suture method. The practical surgeon will therefore select what he believes to be the best mechanical method and the best suture method, master all the details of each, and be prepared with materials and by occasional rehearsals for the skilful execution of the method best adapted to the situation.

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UNION BY MECHANICAL MEANS.

Doubtless any one of several buttons, bobbins, mats or what-not, may be used with more or less success, but increasing experience shows the Murphy button to be on the whole the most practicable. It is cheap, easily preserved indefinitely in readiness and has been used with success and increasing frequency in all parts of the world. Whatever theoretical objections may be conjured up against it, it has probably more success and as few failures to its credit than any other method of anastomosis, when applied properly to proper cases. Of my 9 resections with union by the Murphy button 3 died. One, Case 6, would surely have died despite any method of anastomosis. In one case, No. 9, I was led by the almost moribund condition of the patient to use the large button in an end-to-end union of the sigmoid, though it is generally recognized that the large intestine is not safely united by the button. This death, if due to any operative fault, in no way condemns the button for use in proper cases. In one case, No. 7, an end-to-side anastomosis after resection of the cecum for a very large carcinoma, in a very fat and flabby woman, the death from sepsis and nephritis on the thirty-first day, long after the button had passed, and without any bowel disturbance, makes it probable that the method of union was not at fault. In Case 5 a temporary fecal fistula followed the use of the button in an end-to-end anastomosis of the small bowel, for sarcoma. I have reason to believe that the fistula took place at the mesenteric border. The mesentery was considerably thickened and some difficulty was found in properly adjusting it within the button. Under these conditions either a very much larger amount of intestine should be resected or the suture used instead of the button. The ultimate result in the case has been entirely satisfactory so far as the anastomosis is concerned. In the remaining five button cases the immediate and subsequent course was without any complication.

The duodenum, owing to its fixed position and lack of peritoneal covering, is naturally excluded from end-to-end anastomosis by the button. The large intestine, for many reasons, both anatomic and physiologic, is not adapted to anastomosis by mechanical means. It is less richly supplied with blood vessels, its walls very variable in thickness, the appendices, epiploicæ and its mesentery often thickened and clumpy with fat and considerable portions not covered by peritoneum. Its contents are much thicker and more liable to block mechanical contrivances and its peristalsis comparatively feeble. Hence, with the exception of end-to-side anastomosis between the small and large intestine, the suture should practically always be used. In the unfixed portion of the small intestine, a good union is possible by either button or suture, but, on the whole, I believe the button anastomosis has the most points of excellence: First, it may usually be executed somewhat more rapidly; second, if skilfully applied is evidently primarily as safe in this location as suture. Third. After the button has passed the intestinal wall is left in better condition than by suture. In all suture methods where silk is used there is either for a long time or permanently left in the bowel material with decided possibilities of trouble. With the button, the primary healing once over, the most perfect conceivable condition is usually left and the condition is uniform. As much can not be said of any suture in any case and the results are materially far from mathematically uniform, even in the same surgeon's cases. The most skilful operator will vary a little in the amount turned in and in the regularity of his suture. The mechanism once properly placed cuts by its pressure to the same line. The objections to the button in this locality are mostly theoretical or drawn from very exceptional ill results or cases of faulty technic. When it may be said that any other method is absolutely perfect and without occasional mishap, the practical surgeon may give greater weight to the theoretical objections of a foreign body in the intestine, to isolated failures to pass, or to exulceration of the button, despite the many hundreds of successes at the hands of hundreds of surgeons, many of those of little experience, and the growing tendency of many of the very greatest surgeons at home and abroad to use this method in appropriate cases.

UNION BY SUTURE.

The suture has a much wider application. It may be used in practically all cases to which the button is applicable. In the duodenum and in the large intestines it has for anatomic and physiologic reasons practically the whole field. Hence a surgeon may nearly or quite dispense with mechanical means of anastomosis, but a good suture method is a necessity. While we undoubtedly owe a very large measure of our success to experimental work and the fundamental principles have been thus established, yet experimenters have borrowed an enormous amount of unnecessary trouble about lesser matters of which Nature takes little notice. The necessity of peritoneal approximation, the length of intestine which may safely be resected, the degree of narrowing which is permissible, the difficulties of the mesenteric border, etc., were early elucidated and are essential, but the fears of penetrating all the coats and the special dangers of the knot of elbowing in order to increase the caliber, etc., have been considerably overdone. I feel sure from much personal observation—having followed up individuals for years whose intestines were closed up with very rudimentary needlework—that the fears of some experimenters are not entirely well founded.

Of the 7 unions by suture, 4 were by the Connell method. The Connell suture appeals to me as by far the best suture up to date; first, a continuous suture is the safest; second, penetrating all coats it is the strongest and surest; third, it is a simple set procedure, capable of an unvarying technic from start to finish, with no change of stitch, and no apparatus but needle, thread and fingers; it is capable of greater rapidity than any other method except the button—the easiest and simplest of all, except at its finish. The closure of the last third, and especially of its last stitches, is, of course, somewhat difficult, but after sufficient drill probably not much more so than some part of any competent intestinal suture. It takes the best care of the weak point, the mesenteric border, while the gut is open. With one exception it is, for me, the *ne plus ultra* of intestinal sutures, viz., experimental work and autopsies show that for a very long time, at least two or three months, the thread remains encircling the bowel wall or hanging into the intestine. While I am unable to point to any serious result demonstrably having followed this state of affairs, it is certainly not an ideal condition, and one which would seem pregnant with as many pathologic possibilities as the shorter stay of a foreign body in the case of a button. It is quite startling to find at the autopsy, thirty-one days after the resection, so much thread imbedded in the whole circumference of the otherwise beautifully restored bowel, as was observed in Case 13.

All the unions were end to end, excepting the two resections of the cecum, where end-to-side anastomosis was employed. When the resected ends can be easily approximated without tension and the mesentery is in a normal condition, end-to-end union would seem to be preferable to lateral anastomosis, as it more nearly restores the organs to normal conditions. Pathologic changes in the mesentery may sometimes render it desirable to close the ends by purse-string sutures and make a side-to-side union. When this is done with but little overlapping so that the blind ends are very short, antiperistaltic union is probably without very serious objection. However, an isoperistaltic union would seem preferable whenever practicable under all circumstances, and quite necessary if the blind ends are of much length. In resecting median portions of the small intestine, it is often difficult to quickly establish with entire certainty which is the proximal and which the distal limb of the loop. If an end-to-end union is to be made this is of no consequence, but in case of a lateral approximation it calls for a decision which further complicates the operation. I would therefore not choose lateral anastomosis except in cases in which some pathologic or anatomic condition of the mesentery rendered the end-to-end approximation unsafe.

CONCLUSIONS.

1. Suture is the most indispensable and generally applicable method of anastomosis in intestinal resection.

2. The Murphy button is equally useful, if not preferable, under certain conditions, but very inferior under others. For the end-to-end union of segments of normal small intestine, or the end-to-side anastomosis of healthy small and large bowel, it gives results unexcelled by any other method. In unions of the larger intestine it is so far inferior to suture as to be practically contraindicated. Pathologic changes in the small intestine or its mesentery which render the perfect application of the button difficult or such as would probably disturb the course of healing, should be united by suture.

3. Of suture methods that of Gregory F. Connell is incomparably the best; is, in reality, the simplest; a single row of continuous suture, all within the gut, the most likely to be even, strong and tight, with the smallest and most even diaphragm, admits of the easiest and most perfect dealing with the mesenteric border and is capable of a simple invariable technic.

4. It is especially desirable to choose the fewest and simplest means compatible with the best work, because intestinal operations occur at rare and irregular intervals as emergencies in the hands of many surgeons, and the little conveniences which enter into highly specialized operations of repeated daily execution are for the most part worse than impracticable.

NARRATION OF CASES WITH USE OF BUTTON.

Case 1.—Miss H., age 27. Strangulated femoral hernia. Operation only twelve hours after onset of symptoms. Three inches of small intestine gangrenous. Resection of five inches; end-to-end anastomosis with Murphy button. Prompt recovery. The button passed on the eleventh day. No return of hernia. Now, six years after, health perfect.

Case 2.—Fecal fistula from inflamed umbilical hernia. Mrs. B., aged 46, enormously fat, had a large umbilical hernia of ten years' standing. Three months before coming under my observation symptoms of inflammation and finally of intestinal obstruction had appeared. After eleven days of expectant treatment an abscess had broken through and pus and feces had discharged. A large fecal fistula had since discharged nearly all the bowel contents, only occasionally a little passed *per anum*. The abdomen was opened, the adhesions separated, the hernial sac and a portion of the omentum was removed. and three inches of small intestine resected. End-to-end union with the Murphy button and radical cure of hernia with silver wire. A large area of eczematous skin around the fistula was excised and the skin closed transversely. The button passed on the ninth day. The recovery was uninterrupted, excepting a slight superficial infection, which did not lead to removal of the deep wire sutures. Her health has remained good, no relapse of hernia and no trouble from the wire sutures at last observation, four and one-half years after operation.

Case 3.—Fecal fistula. Mr. M., a farmer, aged 32. Had right inguinal hernia of long standing. About five weeks before coming under observation strangulation occurred, and Drs. DuBois and Hilbert of Sauk Center operated, after which the patient did well and was entirely relieved for ten days, when symptoms of strangulation again suddenly appeared. After a week of vomiting and inability to pass gas or feces, Drs. DuBois and Hilbert reopened the wound and incised a knuckle of adherent small intestine forming an artificial anus.

The patient then again did well for two weeks, when obstruction again, for the third time, became complete. I was then called by Dr. DuBois. The patient's general condition was now bad. He was emaciated and weak, and the operative field was rendered uninviting by recent operations and the recent fecal discharges which had constantly bathed and irritated the skin for two weeks. The operation was made at the patient's cottage under poor surroundings. On reopening the abdomen it was found that a small knuckle of intestine which was attached to the abdominal wall and the seat of the artificial anus had twisted on its axis, leading to complete obstruction. This loop was resected and an end-to-end anastomosis made with the Murphy button. The abdomen was closed with figure-of eight silkworm-gut sutures, and the patient made an excellent recovery with only some slight suppuration in the wound. The conditions for primary union were as unfavorable as could be imagined. I examined the patient two years after the operation and he was well and free from hernia.

Case 4.—Gangrene due to strangulated hernia. Male, laborer, aged 28. City Hospital. The patient entered with a large inguinal hernia, strangulated since six days. The scrotum was red, swollen and inflamed and the patient profoundly septic. On opening the sac about three feet of small intestine was completely gangrenous. Resection of three and one-half feet. End-to-end anastomosis with Murphy button. The wound was left partly open and the wound and abdomen drained. Death followed in forty-eight hours, due to peritonitis and sepsis. Postmortem showed the anastomosis to be perfect, and that the button was in no way responsible for the death. Probably it was a mistake to have resected at all. Under such conditions again I would lay open the sac without a general anesthetic, and if the patient recovered make a subsequent resection, as in Case 2.

Case 5.—Sarcoma of small intestine. Mrs. B., musician, wife of a physician, aged 44. In August, 1896, she began to have looseness of the bowels, and ever since off and on had had spells of looseness, becoming worse each year. In November, 1902, she had a very bad diarrhea, which reduced her strength and weight very rapidly. This diarrhea was of a peculiar character, i. e., it was worse after lunch and still worse after dinner and all night, but from 9:30 a. m. to 1:30

p. m. it was not very troublesome. There were usually from eight to ten movements a day. There was no pain, but a very great quantity of gas was passed, the feces very thin and horribly offensive and of the consistency of muddy water. She was very anemic, greatly emaciated and weak.

I first saw her on the first of February, 1902, and on physical examination could distinguish a mass to the right of the uterus and attached to it, which was apparently of the size of a small fist. I suspected the bowel was involved in this mass, and advised exploratory incision. The operation took place at St. Barnabas' Hospital, Feb. 12, 1902. On opening the abdomen this mass was found to consist of a very much enlarged and dilated coil of small intestine attached to the uterus. The mesentery of the intestine was also infiltrated and thickened. I removed eight inches of the intestine and its corresponding mesentery and made an end-to-end anastomosis with the Murphy button. The patient did remarkably well for a few days, but on the twenty-first she developed some temperature. The abdominal wall was opened slightly and a fecal fistula made its appearance. For a few days a large quantity of feces was discharged through this wound. March 4 the patient insisted on being taken in the ambulance to her home. On March 6 the button was passed, and March 11 the fistula closed permanently, and she was up and about the house March 21, from which time she made a fairly satisfactory recovery.

The portion of intestine removed was believed on gross appearances to be a chronic inflammatory process and the specimen was sent to the laboratory of the University of Minnesota. Professor Wilson reported it to be a sarcoma. The patient is still—thirteen months after the operation—in very good health. At the time the union was made considerable difficulty was experienced in bringing the somewhat clumsy mesentery satisfactorily within the button, and I remember using an extra stitch through the mesenteric border and tying it around the button stem. This was doubtless the point where the fistula took place. It might have been better to have resected a much longer loop, thus securing a more normal mesentery or to have used the suture at the point chosen.

Case 6.—Carcinoma of cecum. Mrs. S., aged 36. For several months has complained of pain and tenderness in right inguinal region and of alternating constipation and diarrhea. There is a tumor in the region of the appendix and the condition thought to be some anomalous form of appendicitis, perhaps tubercular. On operation, carcinoma of the cecum was found. About six inches of the ascending colon, the cecum and four inches of the ileum resected. End-to-end anastomosis with the Murphy button. Uninterrupted recovery and health good when last seen, one and one-half years subsequently.

Case 7.—Carcinoma of cecum. Mrs. L., French, aged 38. Mother of six children, youngest 2 years of age. Previous health excellent, excepting loss of control of bowels from a complete laceration of the perineum. She now wished this repaired, as she had been led to believe it was the cause of her present illness. About one and one-half years ago she began to have pain and diarrhea in the morning, with nausea and pain in the stomach. On examination I found a large woman, a very fat abdomen, and a very large, hard tumor, much larger than two fists, in the right iliac region. Complete laceration of the perineum. Diagnosis, probably carcinoma of the cecum.

Ten inches of the cecum and ascending colon and a portion of the ileum was resected with much difficulty, owing to the advanced stage of the very large growth. End-to-end anastomosis with the button. The button was found in the vagina five weeks later. For two weeks the patient did very well, she then developed temperature, suppuration in the large and deep external wound (the fat was about four and one-half inches thick at this point) and nephritis, dying seven weeks after the operation. No autopsy was permitted, but the death was clearly not due to the method of union, nor, indeed, to the anastomosis at all. The enormous wound in an obese and bad subject became infected, and sepsis and nephritis finally exhausted her resources.

Case 8.—Strangulated femoral hernia. Mrs. M., aged 46, German. Had been ruptured for several years, and for the last two years the tumor had been irreducible, hence, despite symptoms of strangulation, the patient and her family physician had refused to look on the hernia as the cause of the constant vomiting until the fourth day, when I was called in consultation, and insisted on immediate operation. The sac was chiefly filled with adherent omentum, but a very small knuckle of small intestine had recently slipped in, become strangulated and was found gangrenous. Resection of three inches. End-to-end anastomosis with button, drainage of external wound. Prompt recovery.

Case 9.—Stenosis of sigmoid from very small annular carcinoma. Mr. B., laborer, aged 45. Entered St. Mary's Hospital in March, 1900, complaining of a recent right femoral hernia, on which I operated, finding the appendix vermiformis and some omentum in the sac. The appendix, omentum and sac were removed, and he made a good recovery. While at the hospital it developed that he had had some slight difficulty in getting his bowels to move satisfactorily, but this seemed to be better on taking some laxative, and he left the hospital at the end of three weeks.

I saw nothing further of him until July, 1901, when I was called by his attending physician, Dr. Ringnell, and learned to my surprise that he had been having increasing trouble with his bowels since leaving the hospital, until of late he was having frequent attacks of complete obstruction, lasting for days at a time and in the intervals getting liquid movements with great difficulty. He was greatly emaciated and thin and seemed almost *in extremis* from pain, vomiting and distension. Chronic obstruction in the lower large bowel was diagnosed and immediate operation urged. The patient, however, stubbornly refused until September 1, when he consented to return to the hospital. He was then very weak and death very near. On opening the greatly distended abdomen a very small annular growth in the sigmoid, less than an inch in extent, was found, reducing the caliber of the intestine to that of a very small lead pencil. The gas and liquid feces were evacuated by introducing a glass tube into the intestine above the growth, and about four inches resected. On account of the almost moribund condition of the patient I chose the large Murphy button for making the end-to-end anastomosis. Death from peritonitis and sepsis in thirty-six hours. Autopsy showed button plugged and a leak from distension. The first mistake was the patient's in refusing operation for months after it was clearly necessary and strongly advised, the second in using the button under these conditions where suture is always indicated.

Thus of the 9 cases united by the button, 3 died, 1 clearly because no resection should have been undertaken—the patient probably would have succumbed in any event, but the only hope would have been in incision of the sac, which might have been done without anesthetic. In one the larger button was used in an end-to-end anastomosis of the sigmoid, and although the patient was in extremis it is quite possible that he might have recovered by the suture. This is the only case in which I have to regret the method of anastomosis chosen. One dies six weeks after operation, with extraperitoneal suppuration in the abdomen and nephritis. There is no reason to believe the method of anastomosis had anything to do with the result.

NARRATION OF CASES OF UNION BY SUTURE.

Case 10.—Intussusception, necrosis at the neck. A boy, 6 years of age, symptoms of obstruction for eight days. Dr. Glenn was finally called and diagnosed intussusception. On opening the abdomen a large quantity of rather dark serum escaped. About a foot of the ileum invaginated into itself. The neck was at about the point of Meckel's diverticulum, of which there appeared to be a remnant. The invagination was reduced with considerable difficulty and a small necrotic area at the neck necessitated resection of a small portion of the gut. End-to-end anastomosis—Czerny-Lambert suture. Recovery without complication.

Case 11.—Pistol wound of abdomen. W. J., aged 23. Shot in the abdomen with pistol at short range. Wound of entrance two inches to the right and a little below the umbilicus. No wound of exit. Operation twelve hours after injury. Seven perforations of small intestine, closed with continuous Lembert suture. Resection of twelve inches on account of injuries at the mesenteric border. End-to-end anastomosis with Czerny-Lembert suture. Recovery and perfect health two years after.

Case 12.—Sarcoma of the small intestine and uterus. Mrs. M., German housewife, aged 38. In May, 1901, was taken with cramps in the bowels, pain radiating toward the center. She vomited for eight days more or less and there was much distension and gurgling in the bowels, and irregular diarrhea during the past four months. On examination a considerable tumor attached to the uterus could be made out. It was fairly movable and had been mistaken by several for a fibroid of the uterus. I was not just clear what the condition was, but believed it was primarily uterine with attachment to the bowel, and advised an exploratory incision.

Sept. 7, 1901, the abdomen was opened and a loop of small intestine about ten inches long and its mesentery was found involved in a new growth. This mass was firmly attached to the uterus, which was also invaded by the growth. Recognizing the condition as malignant and probably past successful removal, a side-to-side anastomosis of the two limbs of the loop of intestine above the growth was undertaken. After the button was introduced it was found defective and had to be taken out. I then decided to remove the growth and some sixteen inches of small intestine and its mesentery, the uterus, tubes and ovaries, and a portion of the base of the bladder, which were resected in one piece. End-to-end anastomosis of the resected intestine by Connell suture. The time of the whole operation from entering to leaving the operating room was one and one-half hours.

The patient made a good primary recovery, leaving the hospital twenty-seven days after operation to go to her home in Dakota. Her health was greatly improved for some months. Six months later the growth returned and at last reports she was failing rapidly. The specimen removed was submitted to Dr. White of the pathologic laboratory of the University of Minnesota, who reports it to be a lympho-sarcoma of the small intestine.

Case 13.—Mr. H. Carcinoma of the sigmoid flexure of the colon; resection of six inches; end-to-end union by the Connell suture. The patient's health had been excellent until about one and one-half years ago, when he began to experience considerable difficulty in moving the bowels, obstruction symptoms not very severe until the past four months; he has attacks of pain before the bowels move, and for the past six weeks it is with great difficulty that they can be moved at all. By taking much physic and repeated enemata he is enabled to overcome the obstruction. The diagnosis was partial obstruction in lower colon, probably from carcinoma. March 4, 1902, resection of six inches of the sigmoid and end-to-end anastomosis with the Connell suture. The abdominal wound became slightly infected superficially with colon bacillus and discharged moderately for ten days, otherwise the after-course was uneventful. March 31 the patient was apparently well, having been up and dressed for two days. He had made all arrangements to leave the hospital for his home. some two hundred miles distant, on the following day, when he was seized with an apoplectic stroke, from which he died April 4, thirty-one days after the operation. Autopsy showed the operation wounds perfectly healed and the anastomosis was perfect with no intraperitoneal adhesions. On dissecting the intestine the whole suture was found intact in the walls of the intestine, forming a circle entirely around it. None of the stitches had so far been thrown off into the bowel.

Case 14.—Gangrenous strangulated hernia. Sister A., a Little Sister of the Poor. Had a slight femoral hernia of long standing which had been strangulated for at least twenty-four hours. Several unsuccessful attempts at reduction by taxis had been made. On opening the very large sac about ten inches of small intestine was found to be gangrenous. As it was difficult to bring down a sufficient amount of bowel to make a good resection without cutting through Poupart's ligament, the abdomen was opened by a second incision above the ligament. in the outer border of the rectus muscle, the operative field in the abdomen well packed off with gauze, the loop drawn into the abdomen and brought out through upper incision, and twelve inches resected. End-to-end union with Connell suture. The hernial sac then removed and hernial wound closed as usual. Uneventful recovery, patient leaving hospital seventeen days after operation.

Case 15.—Mr. M., a young German farmer, when seen had obstruction of the bowels for four days. His condition was said to have been good until the last six hours, since which he had rapidly collapsed. He had had two very severe attacks of appendicitis ten years before, since the last of which his health had been excellent, until the sudden onset of symptoms of intestinal obstruction. Patient evidently failing rapidly every hour—cold extremities, rapid, feeble pulse, great distension. Nevertheless, the abdomen was opened at his desire. The small intestines were found bound down into the bottom of the pelvis by broad bands, so much so that they appeared to have a mesentery on both sides. The distended intestines could not be turned out of the abdomen on account of their attachment to bottom of the pelvis, hence there was great difficulty in dividing the bands. A knuckle of intestine was so injured that resection of about two feet became necessary, hurried end-to-end anastomosis, with Connell suture rather imperfectly done and reinforced at last third by continuous Lembert. Patient expired within an hour. It is needless to say the result has no bearing on the method of anastomosis.

Case 16.—Mrs. J., aged 32. Had a violent appendicitis and pelvic suppuration some months previously. The abscess had been drained, but appendix not removed. Recovery never complete. At secondary operation intestines matted together in bottom of pelvis by old, well-organized adhesions, small pelvic abscess; appendix removed and many bands and adhesions severed, finally one knuckle of intestine so injured in several places that resection was deemed safer than isolated repairs in its diseased condition. Resection of almost six inches of small bowel, end-to-end anastomosis, Connell suture. Pelvic drainage. Recovery without complications.

Of the 7 unions by suture, 6 recovered; 4 were by Connell suture, with 1 death from collapse within one hour.

DISCUSSION

ON PAPERS OF DRS. CAMPBELL AND DUNN.

Dr. A. F. Jonas, Omaha—The indications for this operation are so plain that they need no discussion, but the methods for doing an end-to-end approximation is a question that involves a multiplicity of ways. The inventive genius seems to be so prominent in American surgeons that no sooner has some one proposed a new method for the relief of any particular affection than the American man is not satisfied to try that particular method, but he immediately goes to work and tries to invent a method, hoping to get something better and something newer. For my own work I have only employed two methods; the first is the mechanical device practiced by Murphy, the second the simple suture. I desire to call attention to four points: The first is to get the approximation of the intestines at the point where it joins; the second, to leave no knots on the outside of the intestines; third, it must be watertight; and, fourth, it must be airtight. Now, with these four things carefully carried out, in a practice requiring a simple form of technic, the simple suture will be the best to use. The only way to do surgery is first to study the pathology, and in the operation do not use any methods that will lead to this pathology in the smallest possible way; if possible, do not use any mechanical devices for the purpose of holding the intestines in position.

Some years ago, Nicholas Senn described in The Journal of the American Medical Association, fifty or more appliances for the purpose of producing end-to-end union. Of all this long series, there is probably only one that is used to any extent at the present time, and that is the Murphy button. Of all the many sutures with which I have become familiar I employ none but the Connell suture, as it is the most easily applied, most satisfactory, gives the best results and leaves the knots all on the inside, thus giving no opportunities for the subsequent formation of adhesions in the intestines. All the forms of sutures which leave the knots on the outside favor adhesions with the other parts of the intestines, or with other organs necessitating secondary operation. In order to properly apply any form of intestinal suture we need to practice that form more or less constantly. To do the operation with the Connell suture will require a certain amount of preliminary practice as with any other suture. It is practically impossible for any man to stand beside the operating table and see anyone else perform an operation and then go home and do the work without preliminary practice. What would you say if a tailor simply stood beside another tailor and watched him apply the stitches to your coat? Would you then expect him to make seams accurately and firmly? Why should you expect any more a man to be able to suture an intestine simply from what he reads in books or from standing beside another operator? The Murphy button, simple as it is in its application, must be practiced primarily on the dog, and certain details must be memorized before its use can be undertaken in the human subject. My plan is to use the Murphy button in all cases where the structures can be snugly drawn together between the two parts of the button. Where the structures are too thick, such as the large intestines, I employ the suture method. So far as Dr. Campbell's method goes, I have the objection to it that he still leaves the knot on the outside.

Dr. J. Shelton Horsley, El Paso, Texas—In regard to the term "intestinal resection," it seems to me there might be still further improvement. Resection means simply cutting out a portion of the intestinal canal, and has no reference to the subsequent joining of the divided ends, which is really the main and most important portion of the procedure. "Intestinal anastomosis" is also objectionable when applied to an end-to-end union. Anastomosis means that an obstruction in the main channel is compensated for by some more or less indirect route, as in the case of small branches of blood vessels taking up the circulation when there is an obliteration of the main channel. When, however, this obstruction in the main channel is removed and the direct current re-established, as in the case of end-to-end union in intestines, the term anastomosis is clearly inapplicable. "Circular enterorrhaphy" means merely suturing of intestine in a circular manner. In the operation for prolapse of the rectum, in which after abdominal section a portion of the sigmoid is drawn up and sewed to the abdominal wall, if this sewing is done in a circular direction, the term "circular enterorrhaphy" could most assuredly be used. "Intestinal union" is a term that is open to none of these objections and would seem to indicate the procedure.

In regard to the continuous suture, I have had a limited clinical experience in intestinal suturing, but a rather extensive experimental experience, and have found that this form of suture is by far the most satisfactory. I believe that the majority of operators who have done much experimental work will agree in this. This form of suture has many advantages not possessed by the interrupted. It is a physiologic principle that rest is essential for repair. It is with this idea that splints are used in fractures and wounded parts immobilized as much as possible. The action of a continuous intestinal suture is in the nature of a splint. In end-to-end union, for instance, where interrupted sutures are used, each distension of gas and every wave of peristalsis tends to stretch or relax the portion of intestine between any two interrupted stitches. When a continuous suture is used this strain is thrown, not on the wounded intestine, but on the thread. It is frequently taught, I believe, that all that is necessary to obtain complete union in intestinal suturing is to approximate serosa to serosa. This is certainly a false doctrine, for something else than mere approximation is necessary to obtain satisfactory union in every instance. This conclusion has been arrived at as the result of nine experiments on dogs. In six fine black silk was used and the dogs were killed after one, two, three, four, six and eight days. In three experiments No. 2 braided silk was employed and the dogs killed after four, six and eight days. Two loops of intestine were sutured, as in the preliminary steps of Abbe's intestinal anastomosis, the suture being continuous and running for about an inch and a half in the long axis of the gut. Another row parallel with the first and about one-third inch distant from it was inserted in the same manner. The specimens were removed after the number of days above indicated and sent to a competent eastern pathologist for examination. The condition of the serosa between these rows of sutures was that of perfect approximation, and on account of the continuous suture it would be impossible for this approximation to be disturbed. The pathologist reported that of the first six experiments, in four there had been failure of complete union of that area of intestine included between the rows of suture; in the other two, in which fine silk was used, the union was complete. Of the three experiments where No. 2 braided silk was employed, only one failed to unite completely. The pathologist also reported that there was markedly more inflammatory reaction around the coarser thread. As the conditions of approximation in these experiments were perfect, and as complete union was obtained in less than half of the number, it would seem that something else besides mere approximation is necessary for satisfactory union. Pressure is one of these things that is most desirable and is furnished by such appliances as the Murphy button. This pressure can be obtained by the continuous suture, but not by the interrupted.

Dr. H. O. Walker, Detroit—The methods by which the operation of intestinal resection is to be performed have been outlined by the gentlemen who have read papers and by the gentlemen who have already discussed them. The method given by the first gentleman would strike me as being one (possibly he can do it rapidly) that would take considerable time, while, as the gentleman just preceding said, it leaves some of the knots on the outside. I have had experience with pretty nearly every form of suture and mechanical appliance. I did one end-to-end anastomosis with the Murphy button in the latter part of 1902. I have used the Connell suture in six different cases; one where I removed 14½ inches of the colon, another 8 inches of the ileum, another the ileocecal junction, another 6 feet of the intestine, another at two different points in the descending colon. The first three cases were successful and the last three died, but I do not know that it could have been otherwise, because the condition of sepsis was such as to preclude recovery.

There is no mechanical device that has recently been brought before the profession that is of more value than the McGraw elastic ligature. I have had an experience in 17 cases with that ligature, and in all of the cases it was successful, so far as temporary relief was concerned. Of these 17 cases 122 jejunostomies were performed for malignant disease and 5 for gastroptosis. The use of the ligature as a mechanical appliance is simpler than anything else that we have. Of course, it is not applicable to an end-to-end anastomosis. It can be done quickly and produce no inconvenience. As has already been stated by the former speakers, no man should attempt to use this ligature unless he has practiced either on animals or on the dead intestines. In regard to the application of this ligature, you take a rubber darning needle, about 6 inches long, and be sure that the rubber in the ligature is in good condition, for in those ligatures which have been on hand for a long time the rubber is liable to break. For instance, we are doing a gastrojejunostomy. You take a bite on the stomach about 2½ inches. First, we make an approximation and run the suture of silk around the intestine and the stomach and then we introduce the ligature, draw it through the stomach and come back again on the intestine. After you have got your ligature in position and drawn it up, be sure you have it well on the stretch before you begin to tie.

Dr. J. B. Murphy, Chicago—The technic of surgical approximation is, I think, of lesser significance than the recognition of the pathologic condition of the intestines in, about and below the line of approximation. I believe that by any of the ordinary methods we will get a good and sufficient approximation if we will recognize the pathologic conditions of the intestines, whatever the position of the approximations, and the failures in intestinal approximation rest principally, I believe, in not recognizing that the intestinal wall is infiltrated, and that its action is impaired for a considerable distance above the position of the resection. My attention was called to this in some of the early operations with the button, where I found gangrene following the insertion of the button. No other legitimate outcome could have been expected; no other result could have been secured by any other method. So soon as we learn to remove a sufficient amount of the bowel at the proximal end to leave completely healthy, uninfiltrated intestinal wall, we will have less failures. That accounts, in my opinion, for the failures in many instances.

Dr. Alex. Hugh Ferguson, Chicago—I would like to raise my voice in favor of the promotion of every man who is going to do intestinal surgery. We can get no good by looking on and seeing others do these operations. We have to do it ourselves, and the paper read by Dr. Campbell is, in my opinion, a very excellent one. I have seen him perform the operation. I have looked over the notes very carefully, and I can see the beauties of that operation. In the first place, you have fewer sutures than by any other method. That flap can be rolled back very quickly, and the other sutures on the outside are few and are only the so-called "tack sutures," because they do not go through into the mucous membrane; so that, although they are on the outside of the bowel, they can not do any harm.

The suture which has seemed to me to be the best and that which I have used the most is the one introduced by Dr. Connell. I have used it a large number of times. The last few years I have been using it almost exclusively when I could, but occasionally I would get a little stuck and could not very well use it, and I would fall back on my old friend, the Murphy button. I have used the Murphy button a large number of times, and it has stood me well in some places where a suture could not be applied, for instance, in removing a section from the lower portion of the cecum or the lower portion of the rectum, where you can not very well employ the suture, but you can put in the large size of the Murphy button. In doing the Bacon operation for stricture you can use the suture and the patient does perfectly well. It comes in very well in gastroenterostomy, and, in fact, there are so many applications for it that I would not pretend to mention them now. The McGraw elastic ligature I used in one case where I had done a gastroenterostomy. I had become a little conceited and thought that I would not get a vicious circle. I made the approximation a little high up, so that the gastric current could not help go down. In this case I was mistaken; it would not do that, and consequently I had to open the abdomen again and make an anastomosis between the two arms of the anastomosis. I did that with the McGraw elastic ligature very quickly and it served my purpose. For some little time afterward he had slight trouble with the circle of Willis until the anastomosis was complete.

I would also like to emphasize what has been said by Dr. Murphy, that failures take place more frequently owing to error on the part of the surgeon in selecting the part where the bowel should be removed than from any defect in the technic.

Dr. O. Beverly Campbell, St. Joseph Mo.—It seems to me that the most of the discussion has been on the McGraw elastic ligature and the older methods. In regard to the knots outside the lumen of the bowel, which question was raised by two gentlemen, it was well answered by Dr. Ferguson, and certainly the knot can do but little harm, and it would certainly be far-fetched criticism that would criticise a knot of that character outside the lumen of the bowel. Of course, some surgeons are getting so very technical that it is a question where they will stop. Now we would not have expected this method to have received more than a discussion, but it does seem to me that we should have discussed this method rather than the older methods, as we are looking for better things, and not for the older methods that we have tested and which we know are good. We want something a little bit better.

Fate of Typhoid Bacilli in Beer.—*Professor Surmont of Lille*, France, has been testing the beer made there in respect to its effect on typhoid germs. He found that the cultures of typhoid bacilli added to the beer were all killed in one-half to sixty-seven hours, the bactericidal effect being most pronounced in proportion to the amount of lactic acid in the beer; the acetic acid had also a lesser influence of the same kind. The beer, as it is manufactured, is evidently a hygienic drink, but when water is mixed with it, as frequently occurs, the germs in the water may prove a source of infection. Beer weak enough to allow survival of bacteria becomes more bactericidal as it ripens, as the bacilli in it generate more lactic acid, which in turn has a destructive action on them.

REPORT OF A CASE OF PEMPHIGUS CHRONICUS.*

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The word pemphigus is derived from a Greek word, which means a blister. Hence the earlier writers used the term, with some qualifying adjective, for all bullous eruptions. This gave a large number of varieties. More recently the term is more restricted in its use, and instead of some of these varieties we hear of the bullous eruptions of syphilis, impetigo bullosa, epidermolysis bullosa, etc.

This seems to indicate that the work of elimination is going on and the term will in the near future be restricted in its use to some definitely described disease or perhaps several varieties of the same disease. The disease known as pemphigus vulgaris by Hebra, Kaposi and others, or as pemphigus chronicus by Unna, Crocker and others, is the one to which no other name is given, and seems entitled to be distinctly known as pemphigus. It would seem that pemphigus foliaceous is but an advanced or malignant variety of the other. In this paper I will not attempt to consider anything but pemphigus chronicus, as that was the affection afflicting the patient whose clinical history I will try to relate. While this is a rare disease, especially in America, it still occurs with sufficient frequency to make it of great interest to those giving a good deal of attention to skin diseases. This interest is increased by its obscure etiology and by the gravity of the disease. While a large percentage of these cases recover temporarily, we would like to quote Kaposi, who has had a large experience and seems to have studied his cases carefully and observed them for a period of years in order to see the final results He says:

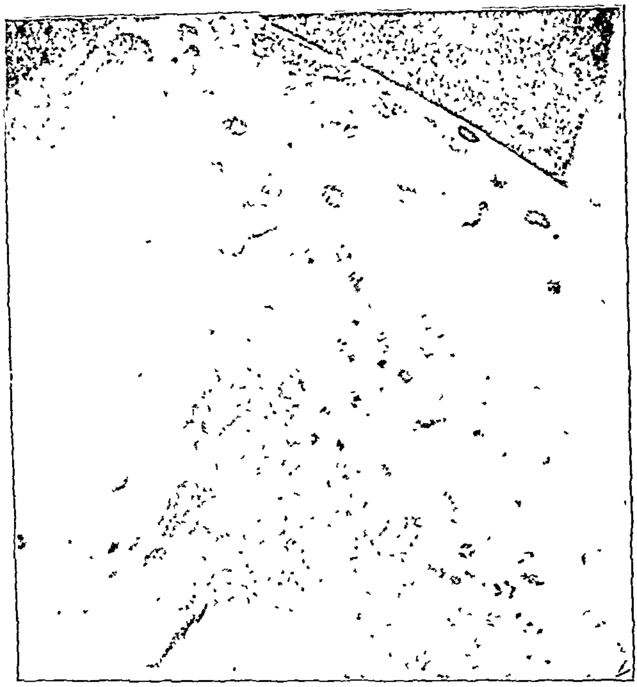

Fig. 1—The eruption on the leg

> In 21 years (1866 to 1887) I saw at the hospital 210 cases, and altogether more than 300 cases. Among 182 cases which were carefully studied there were 35 deaths (with autopsy),

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

i. e., the mortality under our observation was 17 per cent. The remaining 83 per cent. can only be regarded as temporarily "improved" or "cured" and the majority of them terminated fatally. In my estimation, not 10 per cent. of the cases really recover permanently. (J. C. Johnson's translation of "Diseases of the Skin by Kaposi," p. 399.)

Those cases which lapse into pemphigus foliaceous are considered universally fatal. It occurs to me that until the etiology of a disease is well established, careful and accurate reports of the clinical history of the case may be of value; hence the attempt to report the following as accurately as possible. The case occurred in the practice of Dr. E. Carbaugh, by whom I was called in consultation and given the opportunity to observe and report the case.

FAMILY HISTORY.—Mrs. H. D. Father died at 76 of Bright's disease. Mother died at 59 with "some disease" of the liver causing dropsy. She had three brothers and three sisters. One brother had rheumatism and another varicose veins, but all three are living and reasonably healthy. Sisters are all dead. One died at the age of 39 years with gallstone, without operation; one at the age of 39 years with some throat trouble, probably cancer, and the third died at the age of 35 years with consumption. The sister who died with the throat trouble had at one time, several years previous to her death, an eruption of blebs on her face soon after being vaccinated, which was supposed to be a vaccinal eruption. Patient knows of no other skin disease in her family.

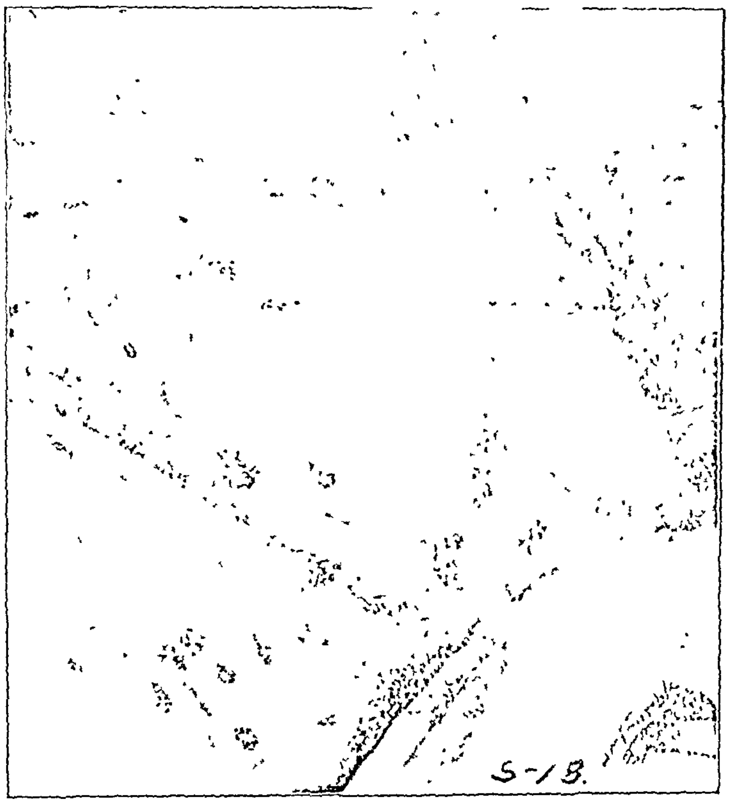

Fig. 2.—The eruption on breast and axilla.

PERSONAL HISTORY.—Patient is 53 years old and has been a widow for the last eight years. She is 5 feet 3 inches high, and previous to the menopause weighed 125 lbs. Since the change, which occurred seven years ago, she has increased in weight to 150 lbs. She is of the blond type, with decidedly nervous temperament. Says she always considered herself an entirely healthy woman previous to her present disease. She was born in Cromer, England, and came to America eighteen years ago. She was married at 29 years of age and had two children, the youngest of whom is now 21 years of age. She had a severe nervous shock eight years ago on account of the sudden death of her husband, and has been more nervous since. Thinks she has had more worry in the past two years than ever before.

HISTORY OF THE DISEASE.—The disease began a little more than two years ago on the mucous surfaces of the labia majora. Bullæ developed, varying in size from a pea to a pigeon egg. These came in crops lasting two or three weeks, after which they entirely disappeared for the same length of time, and then a fresh outbreak took place.

This manner of attack continued until early in June, 1892, when the eruption appeared on other parts of the body in about the following order: Inside the thighs, on legs, arms, breasts, abdomen, neck, outside the thighs, back of hands, feet, face, scalp, mucous membrane of mouth, and soles of feet. All parts of the skin were affected except the palms of the hands. A part of the time when the eruption was very profuse erythematous patches were observed covering considerable surfaces, but these seemed to have no influence on the bullous eruption. Blebs sprung up by the hundreds; sometimes on the erythematous patches, but quite as likely on normal appearing skin. They varied in size from a large pinhead to a hen egg, were superficially situated, and showed the greatest irregularity in *distribution and size*. It was interesting to see how quickly the largest attained their full size. Beginning with the pinhead size, they became as large as a hen's egg in six or eight hours. The most common size of the fully developed bleb was about that of the ordinary filbert, or, possibly, a little smaller. Some never became as large as a pea. Some stood alone, while others were grouped, but with no regularity of grouping. Every day fresh bullæ appeared, but no one could guess where they would appear the next day. One day the principal group might appear on the outer thigh, the next on the abdomen and the next on the foot. The largest of the bullæ developed on the inner side of the thighs. The blebs all stood out semi-globular, tensely filled with a clear, yellowish or straw-colored fluid, which became opaque within twenty-four hours if not ruptured. At the same time all stages can be seen from the beginning of the bleb to the pigmented spot after desquamation. The patient's appetite remained fair, and she appeared fairly well nourished, but rather pale. She complained of being weak and sleeping poorly. Bowels were inclined to sluggishness. Rigors and heat flashes were frequent, and the temperature ranged from 100 to 101 2/5 for a period of over two months. I saw her first on July 17. A urinary examination made July 20 showed: Amount passed in *twenty-four*

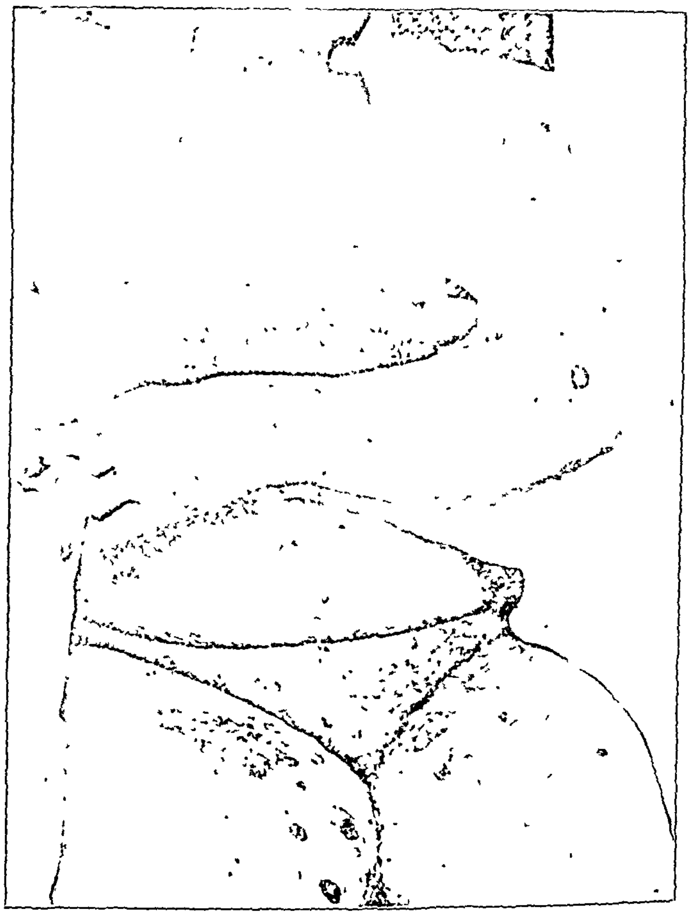

Fig 3.—Distribution of the eruption.

hours, 24 ounces; specific gravity, 1024; reaction, acid; slight amount of albumin, but no sugar; a few coarse granular casts, numerous flat epithelial cells and a few pus cells. This specimen was not taken with a catheter, and we concluded the pus cells and most of the epithelial cells were from the labiæ. Six weeks later another examination of urine, removed by the catheter, showed a normal urine and it still remains normal. All of the finger nails and the great toe nails were exfoliated, beginning about the middle of August, and were replaced by brittle, poorly-developed nails, full of longitudinal ridges. They grow slowly and break off at the free border.

BACTERIOLOGY.—A bacteriologic examination was made of the fluid in the blebs. Fresh, tensely filled blebs were selected and, with a sterilized hypodermic syringe, the clear fluid was withdrawn and thrown immediately into culture tubes. Four tubes were used, with a different culture medium in each. These were given in charge of Dr. E. L. Stewart at the laboratory of the Kansas City Medical College, whose report we give:

"*All the tubes showed a growth* of bacteria. These were plated out and examined. The bacteria isolated in pure culture are of two types, one a micrococcus and the other a bacillus. The micrococcus answers every description of the *Staphylococcus pyogenes albus* and seemed to be quite small. The other type—a bacillus in morphology—resembled very much the typhoid bacillus as seen on agar-agar culture except that it was smaller both in length and thickness and was not so mobile as Eberth's bacillus. It grew readily on agar-agar, gelatin, potato and bouillon, and maintained its mobility and morphology on all four cultures. On agar-agar it first appeared as minute white specks, later becoming confluent and evenly disseminated except at the border, where there seemed to be a slight elevation. In gelatin a stab culture gave a crater form liquefaction which proceeded with moderate rapidity. On potato the growth was not as rapid as on other cultures, but in forty-eight hours showed a smooth, glistening culture. It seemed to stain with carbol fuchsin better than with methylene blue and was decolorized by Gram's method. No experimental inoculations were made."

BLOOD EXAMINATION.—We did not succeed in getting a proper examination of the blood at the time the eruption was profuse. Such an examination was made in February, about six months after that stage had passed, but while a few blebs were present on different parts of the body. This examination showed a normal blood in every way.

We were unable to secure material for a histologic examination.

The period of profuse eruption continued from early in June till late in August, nearly three months. The last week in August the number of bullæ diminished rapidly and seemed to cease about September 1. For about two months there were none to be seen on the body, but on the mucous surface of the labia, which had been better during the three months mentioned, the same condition reappeared as before. It still continues, fresh blebs continually appear and soon break, leaving raw surfaces. This location seems never to be entirely free; on other parts of the body a few poorly-formed, superficial bullæ form, soon rupture and disappear. The patient has gained in strength and appears in nearly normal health in every other way.

TREATMENT.—The treatment of the case consisted in the use of nutritious foods, perfect rest in bed, removal of all excitement and worry, and the administration of tonics, especially arsenic. Quinin, iron and strychnia were also freely given. The treatment which gave the most comfort and seemed to do the most good was the antiseptic bath. It seems all observers agree that this is a valuable aid in treatment. Hebra and Kaposi report severe cases cured by means of the continuous bath. We were unable to secure such a bath, but used a simple warm water bath and also medicated or antiseptic baths (bichlorid and boracic acid). The simple bath did not seem to accomplish as much as the medicated. The bichlorid bath seemed to do more for the patient than any other kind. This was given as strong as 1 in 5000, the patient remaining in it fifteen minutes. This strength was not used daily for fear of getting too much absorption of mercury, but a weaker solution, 1 in 20,000, was used more frequently than the other.

We are not trying to prove the cause of this disease in this paper, but simply reporting our observations. It seems quite reasonable to me to conclude that the point of departure from health is in the nervous system and through this the skin manifestations take place.

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THE TREATMENT OF EMPYEMA BY CONTINUOUS ASPIRATION.

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The disastrous results which sometimes follow simple open drainage of empyemas have induced a number of experimental and practical workers to undertake improved methods of treating such cases. These bad results consist in the failure of healing; in the formation of fistulas leading down to large cavities, often persisting for years after incision and drainage; osteomyelitis of ribs; retracting of connective tissue about the pleura, resulting in distortion of the thoracic viscera; infection with tubercle bacilli; secondary and remoter conditions such as amyloid degeneration and intercurrent diseases; and especially the distortions of the skeleton and the distant musculature due to the contraction and collapse of the chest walls. Most of these consequences are due to the mechanical conditions under which healing has to take place.

When the pleural cavity is widely opened the lung, on account of its elastic tissue, retracts immediately toward its root. During expiration there is a slight tendency on the part of the collapsed lung to expand, owing to the air from the injured lung being driven by expiratory pressure into the bronchus of the opposite side. During this temporary distension of the lung adhesion between parietal and visceral pleuræ can occur. The unfolding of the collapsed lung and the filling out of the pleural cavity take place partly by a progressive union between the parietal and visceral pleuræ due to the relief of tension at the point where granulations are most effective, during expiration (Roser).

Another cause of the closure of these cavities is to be found in the filling of the space by granulation tissue, while retraction of the new-formed scar tissue aids in drawing together the pleural surfaces, diminishing the size of the cavity. Relaxation of the diaphragm and the partial collapse of the chest wall, together with the adaptation brought about by the attendant scoliosis, give assistance in the process.

When cavities are very large interruption of any one of these processes may stop the progress of healing and the condition may persist for years.

Naturally the proper material to fill this space is the lung. To close the cavity by the alteration of the chest wall or by the pulling over of the mediastinal organs to meet the parietal pleura are makeshifts of but slight physiologic value. Obviously the correct procedure lies in the rapid closure of the cavity by inducing the lung at once to meet the parietal pleura, so that the pleural surfaces may quickly heal by granulation.

Several attempts have been made by different workers to overcome the pneumatic difficulties involved in these cases. Schede showed in 1890 that a common bandage could be made to act in a valvular way if it were made very large and put on very tight, and he has given us

He notes that in all recent cases the lung was distended (*entfaltet*) in a few days, "and yet the secretion diminished only gradually and the healing of the space (*spalte*) remaining after removal of the drain required a considerable time. This is only to be explained by assuming that a certain time was required until the pneumococci or streptococci imbedded in the superficial layers of the pleura died."

Perthes considers that his apparatus should be used when, four days having elapsed after incision, it is found that the lung has not resumed its contact with the parietal pleura. Of course, in many instances the tight dressing of Schede suffices.

In chronic empyema the necessity for the employment of this method of treatment is even greater than in acute cases. The second case observed by the writer convinced him of the value of the method under such circumstances.

Case 2.—George W., aged 6, entered Wesley Hospital Dec. 1, 1901. His previous health had been excellent. Seven weeks before, the parents stated, the child became ill rather suddenly and the family physician diagnosticated a pneumonia on the left side. Although the cough diminished, the patient did not improve much, and gradually the left side became more and more swollen.

On admission the patient was found to be a fairly well-developed child, but very much emaciated. He lay by preference on the right side and coughed a great deal.

Dulness on the left side extended from almost the level of the clavicle to the diaphragm, and from the spine to a point beyond the anterior median line. The heart was pushed well over to the right. The pulse ranged from 116 to 144; the respirations from 48 to 54. Marked bulging on the left side.

On account of the great embarrassment of the respiration and circulation the writer's usual practice of operating under local anesthesia was followed. At clinic an incision about one inch long was made in the anterior axillary line at the sixth interspace and an enormous quantity of pus escaped. Respiration became stormy and labored, until a large dressing was quickly applied. For several days the patient remained extremely weak, but, the temperature becoming nearly normal, improvement at last began and the cavity rapidly diminished in size. But when thirty lays had passed and the cavity had for a week held two ounces of fluid, it was decided to apply Perthes' apparatus to hasten the healing process. In five days the capacity of the cavity was diminished by half. The manometric pressure was raised from thirteen to twenty-five millimeters. Two days later, January 9, it was again increased to forty-seven millimeters; January 11, to fifty-three millimeters, and January 17 to seventy millimeters. After forty-eight hours the apparatus was removed and dry dressings applied. The sinus was a little slow to heal, but on January 26 was finally cicatrized.

The deformity was very slight and will, I think, eventually almost entirely disappear.

These cases are presented because the writer considers them suggestive rather than demonstrative, and because the original apparatus of Perthes' can be extemporized in the manner indicated.

The writer believes that a very important field of usefulness exists for continuous aspiration of the pleural cavity both in acute and chronic empyema.

103 State Street.

The Campaign Against Quackery.—To discourage poor persons who suffer from pulmonary affections from patronizing concerns which profess to have a cure for consumption, the tuberculosis committee of the New York Charity Organization Society has issued thousands of circulars to the poor. This was because a concern had attempted to link the name of the society with one of its advertisements in such a way as to cause the impression that the society indorsed the "cure."—*Pharmaceutical Era.*

UNILATERAL DISEASE OF THE KIDNEY SIMULATING STONE.*

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CINCINNATI.

When one considers the achievements in any field of surgery there is always one spot brighter than the rest by reason of especially good results; results obtained through faultless interpretation of symptoms and clinched by brilliant operation. In the field of renal surgery this applies to the operation for stone in the kidney, that is, when a stone is found. Unfortunately the elating thrill the surgeon expects to experience when the finger touches the stone in the opened kidney is not always felt; in its place is chagrin, if not discomfiture, when the fullest search fails to reveal the object sought for. To whom has it not occurred? A year ago the writer saw one of the foremost specialists in kidney surgery fail to find a stone in two cases within ten days. Were Tiffany to rewrite a paper presented before the American Surgical Association in 1889, he might readily present the reports of 200 cases instead of 21 in which the kidney was explored with results negative as to finding of a stone.

Two questions, necessarily correlated, at once arise, the solution of which would remove the obloquy attending a seemingly fruitless if not hazardous operation. They are: 1. Have we any positive and absolute method of recognizing stone in the kidney? 2. Are there not other pathologic conditions in the kidney, the symptom-complex of which covers to a nicety that of stone? In determining the first question in a positive sense the Roentgen ray was of necessity a formidable factor from the moment its penetrating power was known. With increasing experience in the methods of exposure, radiography will, in most instances, give positive results. There are few of the world's famous specialists who, like Leonard, are ready to make a negative diagnosis of kidney stone.

When I contemplate a few of the stones I have removed by operation, weighing 11, 15 and 20 grains respectively, some of them not larger than a pea, and removed from very fleshy individuals, I can not but believe that their discovery by the *x*-ray would have been largely a matter of chance. It goes almost without saying that an effort should be made to locate a stone by radiography in every suspicious case before operation. The sounding for kidney stone with a wax-covered ureteral bougie, as suggested by Kelly, seems to me chimerical in the extreme. To one conversant with the variations in position of a kidney stone it must be evident that its detection by sounding must be altogether fortuitous. Aside, then, from the positive presentment of a calculus by radiography the signs most relied on are pain, paroxysmal or continuous, and certain changes in the urine.

To consider the former at length is beyond the scope of this paper. Suffice it to say that the pain of stone may be simulated by any gross pathologic conditions of the kidney or ureter, such as tuberculosis, tumor, hydronephrosis, etc., and what is most relevant to the question propounded, by microscopic changes in the kidney, changes affecting either the secreting, the circulatory or supporting frame work and capsule of the gland. While ordinarily renal colic is associated with intrarenal retention from obstructed outflow, in certain chronic affections of the kidney with acute exacerbations the distension of a resisting capsule from within may be, and often does, give rise to a typical renal colic.

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* Read before the Southern Surgical and Gynecological Association.

The most important factors making for a diagnosis of stone are obtained from an examination of the urine. Everyone associates hematuria with stone in the kidney. While this may be as profuse as in malignant tumors, it has, in my experience of nearly 20 cases, been marked rather by sparseness. In a paper[1] read before the American Medical Association in 1895, I insisted on the microscopic character and constancy of the hematuria as almost characteristic of stone in the kidney. The centrifuge alone will help us to distinguish a few, probably faded discs in nearly every sample of urine voided, and as long as pyelitis is absent a number of leucocytes proportioned to the discs as in normal blood. Albumin, except in traces, and casts, epithelial or blood, are not found ordinarily in the urine from a stone kidney, unless secondary nephritis has developed. The bleeding comes from the pelvis or its larger tributaries. During or after a renal colic the hematuria may be profuse. Its source is then not the pelvis alone, but the congested renal parenchyma, as it is in the hematuria from hydronephrotic kidneys.

In the urine of 1,997 persons examined by Musser blood was found by microscope in 364. All the cases of kidney stone had hematuria. "It is not an intermittent phenomenon, but one that is constantly persistent."

When we next consider that in certain but few cases of undoubted chronic nephritis albumin and casts are absent, often for months at a time and sometimes altogether, and that both pain and hematuria either microscopic or profuse may be present, it seems evident that the difficulties of differential diagnosis at times are insurmountable. True, in most cases of Bright's disease, hematuria is always microscopic; indeed, profuse hematuria has, until very recently, not been associated with this condition by clinicians. Naunyn's recent report of three cases has directed attention to the possibility of profuse hematuria accompanying Bright's disease.

With these difficulties of diagnosis before us it necessarily follows that cases must multiply in which a supposed stone is not found by operation or autopsy, and that many kidneys explored superficially by such inspection, as an operation permits, would be found seemingly normal. It also follows that explanations of the symptom-complex on some basis other than anatomic would be forthcoming. Because of the absence of such a basis it was natural that the pains should be designated neuralgic; surely an explanation that fails save in the rare cases of renal crises of locomotor ataxia, described as long ago as 1876 by Raynaud and Le-Reboullet, and distinctly allied to the gastric crises of Charcot. It remained for Sabatier, in 1889, to originate the euphonious term hematuric nephralgia to designate this group of symptoms; a term which defines concisely, but fails to explain. It is curious that in the Sabatier case he found a slight inflammation of the kidney, the importance of which in the production of symptoms he failed to recognize.

The same criticism of defining without explaining applies to the more recent terms of essential hematuria, angio-neurotic hematuria and renal hemophilia. But these terms are justifiably used when the non-existence of inflammatory or other changes in the kidney has been demonstrated by minute examination of post-operative specimens or by postmortems. How difficult this may be and how slight the changes, is illustrated by a kidney removed for essential hematuria and presented by Nickolish to the Paris Academy a year ago. In Vienna the kidney was pronounced normal. In Paris Albarran and Motz found marked evidences of glomerulonephritis. That profuse bleeding from the kidney can be a symptom of hemophilia, various forms of toxemia or arteriosclerosis without local changes in the kidney, is not to be questioned. It has also been noticed from normal kidneys after very prolonged exercises, notably horseback rides of many hours' duration. Barring these conditions, does it occur from normal kidneys? According to Schede, this only occurred in six cases, and Israel only concedes two, those of Schede and Klemperer, in evidence of its possibility.

A critical analysis of the conditions found when kidney stone or tuberculosis was fruitlessly sought, answers in the affirmative the second question propounded in the beginning of this paper, namely: Are there not other pathologic conditions of the kidney, the symptom-complex of which cover to a nicety that of stone? Such analysis, furthermore, enriches our knowledge of renal pathology by two important data. They are: First, that bilateral, chronic nephritis often manifests itself as an unilateral disease; and, second, that just as tuberculosis or infarct, though hemogenetic, may be unilateral, chronic interstitial, parenchymatous and capsular inflammation of the kidney may be limited to one side. Rayer already called attention to a case of this kind in his classical treatise on the kidney. Carefully studied cases of this nature are not numerous. This is my reason for presenting the following case:

History.—W. H. C.; aged 58; merchant. Family history negative in regard to patient's complaint. Father died at 56 of gangrene of the foot, mother died at 76 of pneumonia. One brother died at 60 of cancer of the stomach. Patient has always claimed to be of frail health. Had ordinary diseases of childhood. While in the voluntary navy had malaria. In 1884 had an attack of scarlet fever. After the attack of scarlet fever he became troubled with what was supposed to be cystitis, for which he was treated from time to time for ten years. In 1860 he had gonorrhea. About fourteen years ago he had his first attack of pain in the right loin and underneath the lower right ribs. This was associated with a sense of fulness and of soreness. He experienced at the time a sense of abdominal tension, which was relieved when vomiting set in. This was associated with an irresistible desire to urinate. Micturition was frequent and very painful. The attack lasted for several days, and was supposed to be appendicitis. The attacks first returned from time to time, and, to use the patient's language, then became more insistent and persistent. The patient has not been free from pain for a month at a time in the last ten years.

The case had been diagnosed at different times cystitis, appendicitis, pyelitis, stone in the kidney and floating kidney. When seen with Drs. Stewart and Forchheimer, the patient presented the following condition: Middle aged man of nervous temperament and ruddy complexion. Shows facial traces of severe suffering. He had been confined to his room for six weeks with pain in the right side of the loin reflected to the right groin. For the relief of this pain, the patient takes two to five grains of codein daily. During his confinement his temperature was always normal. When the attacks of pain are severest there is frequency of micturition. Micturition is painless. Never complains of pain in region of the left kidney.

Physical Examination.—This is negative except for some tenderness on deep pressure in the right costo-vertebral angle and over the right ureteral crossing over the pelvic brim. The kidney can not be palpated. Cystoscopic examination negative. Separation of the urines was not attempted.

Urinalysis.—While the patient was under observation fully fifty samples of urine were examined. At times there was a slight polyuria. The urine was always clear and limpid, free from albumin and casts. Every specimen examined when centrifuged, presented from five to ten red blood cells in the microscopic field. Often they were difficult to discern. Evidences of pyelitis were not found in the urine at any time. Hematuria was never manifest to the naked eye.

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[1] The Journal A. M. A., July 6, 1895, p. 1.

Feeling nearly certain that the kidney harbored a stone, an *x*-ray picture was taken. Although it clearly revealed the kidney shadow, it showed no stone. An exploration of the kidney was nevertheless determined on.

Operation.—At Jewish Hospital, April 21, 1902. Oblique, lumbo-abdominal incision. When the deeper layers of the perirenal fat were reached, they were found much firmer than normal, and in exposing the capsule of the kidney firm adhesions to this of the fat layer had often to be divided with knife or scissors. The freeing of the kidney preliminary to incising it was as difficult as I have seen it after long-standing pyorenal fistulæ. The kidney, of about normal size, was very grayish in color and much firmer to the touch than normal. A stone could not be felt. After placing an elastic ligature in the usual way about the pedicle, the kidney was freely incised in the line first described by Hyrtl, and the pelvis opened. Except for possibly a slight dilatation of the latter, nothing abnormal was found. To the naked eye the kidney section appeared normal, except for a grayish color which may have been due to the operative ischemia. A thin section was removed for microscopic study. The ureter was easily probed to the bladder and found normal. The operation was terminated as an aseptic nephrolithotomy. This was perhaps a technical error, for a slight infection occurred which delayed recovery. The suppuration was extrarenal. In the course of this, a thrombosis of the left femoral vein supervened. June 5 the patient was discharged from the hospital well, except for a slight swelling of the left foot, the last sequel of the femoral thrombosis. This also disappeared. Since his return from his vacation the patient has followed his affairs; has had no pain of any kind, and repeated examinations of the urine fail to show any trace of hematuria. November 1 the patient reports a gain in weight of twenty-four pounds since the operation.

Pathology.—The following is the report of Dr. Hiller on the findings: The examination of the thin slice of kidney substance removed *intra vitam* reveals changes in the parenchymatous elements. Although the glomeruli have generally retained their normal appearance, here and there in areas the normal tingibility is lost, and distinct atrophy with granular change has occurred. The cells lining the tubules show in these areas a granular change with desquamation, the lumen of the tubule being often occupied by a granular debris in which nuclei are absent. On looking at the apparently normal kidney structure in the slide, the quantity of red blood cells both in and outside of the blood vessels stand out in bold relief. There is not present any distinct overgrowth of connective tissue nor are there any bands passing from the capsula propria of the kidney. This structure, although it does not appear thickened, seems unusually dense toward the outside.

In April, 1903, the patient reported from the Nile that he was in perfect health.

REMARKS.

The case presented is evidently one of atypical chronic inflammation of the kidney. In patches there was a distinct glomerulonephritis. From the adherence of the capsule proper to the fat capsule one might believe that a stone had existed at one time and was passed. The disappearance of the microscopic hematuria after the operation and the disappearance of all symptoms, and the fact that the patient never suffered from pain in the left kidney, make it reasonably certain that the disease in this case was unilateral.

Of considerable importance is the fact that a surgeon should not consider an operation on the kidney, in which he expects to find a stone negative in its results, when other changes in the kidney, as in the case reported, cover to a nicety the symptoms of stone. The capsule splitting and the section of the kidney will doubtless relieve many cases which simulate stone, and in which, because of the impossibility to make a positive diagnosis, are not now subjected to an exploratory operation.

In conclusion, the author would advise that in every case a small section of the kidney be removed for the purpose of microscopic examination. It is only in such a way that minute changes of the kidney can be discerned, changes which, although seemingly slight, are often capable of producing, as in the case reported, the severest symptoms.

ACUTE SUPPURATIVE CERVICAL ADENITIS OF INFANCY.*

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The condition to which I would direct your attention within the brief limits of this paper is by no means rare to those who have considerable clinical experience among children, and deserves to be qualified by the words "of infancy" inasmuch as the great majority of the cases occur in children under 2 years of age. At this period of life the lymphatic system is especially vulnerable and the lymph nodes in the cervical region particularly liable to infection and suppuration.

While in a few of the cases met, the infection of the gland has been preceded by and is traceable to some infected cutaneous lesion, in the vast majority of the most typical cases it seems evident that they are dependent on absorption from the nasopharyngeal space. The degree of inflammation in the nasopharynx seems to bear but little relation to the occurrence of the glandular swelling, many young children suffering from acute coryza or pharyngitis of considerable severity with slight or no enlargement of the cervical glands, while in others, presenting the type under consideration, it is rather the rule than otherwise that there is little or no nasal involvement at the time of the attack, although careful inquiry may elicit the history of an almost forgotten coryza a week or ten days previously. We are therefore led to infer that pathogenic germs have been carried to the glands and have there remained quiescent, or that areas persist in the nasopharynx from which by absorption a sudden glandular inflammation of considerable intensity may be lighted up.

It may be well for greater clearness to state that while those infectious diseases of childhood and the exanthemata which affect the mucosa of the nose and throat may often be accompanied by swellings of the cervical glands or even by suppuration, these are not at present under consideration, nor do they present the characteristic type and course of the acute cervical adenitis of infancy.

The usual history of the latter is that either with or without a known antecedent attack of influenza or coryza there is the sudden appearance of a marked swelling below the angle of the jaw, which, on examination, proves to be due to palpable enlargements of a lymph gland or glands lying somewhat deeply and obliquely from behind downwards and forwards just below the angle of the jaw and either chiefly anterior to or posterior to the sterno-cleido-mastoid muscle. The variation in the antero-posterior position of the mass appears to be due to the fact that there are two glands lying on about the same horizontal plane, one or both of which may be involved. The anterior one of these is easily palpated, the posterior one, which causes the swelling behind the sterno-cleido-mastoid, less easily, probably owing to its deeper position. Usually the chief incidence of the inflammation falls on but one of the glands, and the position of that one which is most enlarged determines the location of the mass. Holt in his text-book pictures the tumor as usually posterior. I have found it with about equal frequency anteriorly, and I present for your inspection two photographs of the same child in which evacuation and partial healing of the anterior gland was followed by typical involvement and suppuration posteriorly, which definitely confirmed my opinion that one or both of two glands might be involved.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

Despite these variations, however, the general appearance and situation of the swelling is so characteristic that the diagnosis can usually be made by inspection. The child's head is thrown towards the opposite shoulder and the usual hollow beneath the angle of the jaw is replaced by a prominent mass, one and a half to two inches long by an inch or more in depth. Fever is usually present, 101 to 103 degrees, with malaise and irritability, and the mass is more or less tender to the touch. Where resolution takes place the gland remains about the same size for some days, firm and easily movable, and then decreases in size more or less rapidly. If suppuration is to occur the definite outline of the gland is lost after some days in a brawny infiltration of the surrounding tissues and with considerable uniformity fluctuation is followed by pointing at about the end of the second week.

The careful clinical observer will not confuse this condition with the less definite external swelling caused by the dissection outwards of a post-pharyngeal abscess, which, if it have reached that degree, already gives its own characteristic clinical symptoms; nor with mumps, the swelling due to which surrounds the lobe of the ear and in young children extends but a short distance below the lobe—in fact, terminates at about the point at which the mass of an acute adenitis begins. The fact that tuberculous adenitis rarely occurs before the beginning of the fourth year, and that the progress of such glandular enlargement and suppuration is rather a matter of months than of days, should, but unfortunately does not always, prevent the mistaken diagnosis of that variety of infection.

To the parent any affection of the infant which calls for surgical interference with the knife is a source of anxiety and mental suffering, while cicatrices on visible portions of the body, such as the neck, are an especial source of regret. When suppuration has occurred with beginning fluctuation it is an important rule in the management of these cases to delay incision until the thoroughly softened mass points with redness, enabling us to choose for our incision a location where the skin only need be cut through to reach the purulent accumulation. This is occasionally considerably delayed, especially in deep-seated accumulations posterior to the sterno-cleido-mastoid muscle, but in the few cases where an earlier incision has been made without distinct pointing it has been evident that the glandular tissue had not fully broken down, and discharge from the abscess cavity was prolonged and healing was tediously protracted.

The general surgical rule to lay open freely any pus cavity for the purpose of securing adequate drainage has a notable exception in these cases of acute adenitis of infancy. Here the smallest incision which will allow of the evacuation of the pus and the introduction of the smallest obtainable drainage tubing is sufficient. If the mass is properly softened, as shown by pointing, the distended cavity contracts and granulation goes on with almost marvelous rapidity, granulations often pushing their way into the *fenestræ* of the tubing as early as the third day. Packing with gauze or the use of drainage wicks I have long since abandoned in favor of the tube, for the former is unnecessary, and both packing and wick become dry and adherent at the orifice, defeating our purpose by occlusion; favoring accumulation of pus and delaying restitution.

Since scars on the neck are to be regretted, especially in female infants, considerable attention has been given to securing the best cosmetic results by placing the smallest possible incision where it will be least noticeable. This is attained by placing the child in a bright light and seeking on or near the distended area of pointing for one of the delicate lines which mark what were the bottoms of the natural folds of the skin of the normal neck. On this line or, if it can not be traced over the mass, on a direct extension of this line, an incision is made without anesthesia but one-fourth of an inch in length. Evacuation of the pus is then favored by very gentle pressure and the occasional introduction of a grooved director or small dressing forceps until the cavity is entirely emptied. After slight stretching of the orifice with the dressing forceps a fenestrated tube three-sixteenths of an inch in diameter and one and one-fourth to one and a half inches long is introduced on a probe or small director to prevent doubling so as to reach the deepest portion of the cavity. This is secured externally with an 00 safety-pin, beneath which a fold or two of the dry dressing is, of course, placed to prevent uncomfortable pressure. On the second day usually the length of the tube is reduced one-half. On the third or fourth day there is but little discharge on the dressing and the tube may be removed. Thereafter there is a little thin mucoid discharge for a few days, and at the end of about eight days the wound is healed, leaving a minute scar at the bottom of a natural fold.

Where, after the removal of the tube, there is considerable induration of the tissues, the application of a 10 per cent. ichthyol ointment favors absorption and is more comfortable for the child than the dry dressing which becomes rough and hard with the drying discharge. When two adjacent glands have been involved and but one suppurated, induration is slow in disappearing. Rarely, as in the case of which I have shown you photographs, the adjacent gland suppurates later. If softening occurs rapidly we may occasionally reach the new cavity through the unhealed incision, but this is not often feasible. I have seen one case where it opened spontaneously on the seventh day into the unclosed sinus. Bilateral adenitis is not uncommon, but if one side suppurates the other usually resolves. My records, however, show cases where the other side suppurated from twenty days to six months later. Suppurative otitis media on the same side is a common sequela.

While strongly urging delay in incising until the appearance of localized pointing, this delay should not be prolonged until the skin is badly undermined, for in such neglected cases brought late to the surgeon healing is slow and unsatisfactory. This recommendation also should in no wise be construed to apply to the deep brawny phlegmon of the neck occurring in the course of scarlet fever where early incision is urgently indicated to prevent destruction of tissue if not of life.

Not all cases, however, of acute adenitis of infancy go on to suppuration. Holt states that in his experience of 109 cases, of which 96 were cervical, 62 per cent. suppurated. In my earlier experience with these cases certainly the majority of the glands broke down, but since the employment of the early and energetic abortive treatment, to be detailed below, suppuration has been the exception. Some years ago attempts to discover a successful abortive treatment were begun. Ichthyol ointment in various strengths was usually unavailing. Painting with iodin gave no better results. The continuous use of the cervical ice bag was ineffective. The various proprietary preparations of glycerin, kaolin and antiseptics in a mass of putty-like consistency, were faithfully tried, and only served to hasten suppuration like a poultice, for which purpose I now occasionally use them when abortive measures are clearly useless in the later stages. Absorption through the skin was evidently not sufficient in this region to affect the deep-lying glands.

The connection between chronic or subacute enlargement of the lymph nodes at the angle of the jaw and catarrhal conditions in the nasopharynx dependent on the presence of adenoid masses was then brought to my notice by the writing of Dr. Joseph Huber. The nasopharynx, owing perhaps to its situation and construction, has been accorded rather more than the usual neglect shown cavities whose interiors do not lend themselves easily to direct inspection. It seems to be only of comparatively recent date, despite the intimate connection between the condition of the mucosa of the nasopharynx and the integrity of the eustachian tube and the middle ear, that treatment of inflammations of the respiratory tract has been directed with any degree of regularity to this most resistant seat of catarrhal trouble, which, especially if adenoid masses are present with their deep sulci, affords an ideal opportunity for the retention and absorption of septic material. It is to Jacobi and Caillé that we owe, in this country most especially, the earnest recommendation of the nasal and post-nasal toilet for children, but only in the infectious diseases has this teaching taken root in general practice.

The connection between inflammatory conditions of the nasopharyngeal space and acute infections of the glands at the angle of the jaw once in mind it seemed probable that if promptly after the lighting up of the primary inflammation of the gland as evidenced by its enlargement, further absorption of infectious matter from the nasopharynx could be prevented, the gland might be able to cope successfully with the initial invasion and resolution occur, but that if fresh invasions were allowed to take place resistance would be overcome and the gland would break down. Attention was therefore at once directed to the problem of limiting septic absorption from the nasopharynx by measures which would keep the mucous membrane clean and also restore it as soon as possible to a normal condition. The plan adopted was as follows: When fever was present tablets were given containing:

℞. Tinct. aconiti
Tinct. belladon., āā..................m 1/4 | 016
Camphor..........................gr. 1/10 | 006

Sig.: One-half to one tablet, according to age, every two hours.

Chlorate of potash has an almost specific action in limiting the pharyngeal inflammations of childhood, therefore:

℞. Potassi chloratis...............gr. i to ii | 06-.12

Sig.: Every 2 hours for 24 hours, then every 3 hours, and later every 4 hours.

To cleanse and soothe the naso-pharynx:

℞. Tablets alkaline antiseptic (Seiler).

Sig.: Dissolve one in half glass water and pour a little with a teaspoon into each nostril every 3 hours.

The results obtained from the institution of this line of treatment were immediately most gratifying and a period of over one year during which these abortive measures were successful in producing resolution in every case would have been made rather too favorable a report to be credited. I have therefore withheld it until the series has been broken by a few failures (four in number) which under careful observation have in themselves proved most instructive.

A comparison of the series of cases, both without and with abortive treatment, shows in the latter a very marked reduction in the frequency of suppuration. In children over one year of age among whom under old method pus formation occurred frequently, there have been no failures. In infants under 1 year there have been but four failures, at 4, 5, 7 and 10 months of age respectively, in each of these temperature persisted and reached an average of 101 to 102 degrees each day.

1. The conclusions to be drawn from my experience are that: The abortive treatment of acute cervical adentitis of infancy as outlined is most promising, especially in children over 1 year of age.

2. The younger the infant the greater is the liability to suppuration.

3. A continuation of temperature makes the occurrence of suppuration probable.

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DISCUSSION.

Dr. A. C. Cotton, Chicago—I believe it is my duty to go on record as approving this paper in the main. There is nothing especially new in the idea of the nasopharyngeal treatment of such cases, yet it is a matter of common observation that it is very rarely carried out. I think most practitioners of to-day will approve of a careful, judicious antiseptic cleansing of the nasal and post-nasal cavities. To be sure, there have been some objections on account of the possibility of forcing fluid, or rather infection, into the eustachian tube. With perhaps this single objection, I presume no one would differ from the essayist in regard to the importance of this nasopharyngeal and oral toilet. The determination of how much we believe in a thing may be best arrived at by observing our actions in regard to it. The Wisest Teacher said: "By their fruits ye shall know them." I recall a friendly review of a little publication that I brought out a few years ago, in which the book was treated in a most flattering manner, but the review closed with this statement: "The author's west side babies must be more tractable than those of the north and south sides, if they will permit the use of the tooth brush and atomizer advocated in this treatise." It was my privilege a year later to show the reviewer some families in which the daily systematic use of the tooth-brush, atomizer or nebulizer was as much a part of the toilet as the daily bath. The difficulties which to some physicians seem to be obstacles to the daily cleansing of the nasopharyngeal area are really insignificant. One father exclaimed: "Would you have me hold the child morning and evening while the mother and aunt perpetrate this cruelty?" It is needless to say that it had been improperly done. A little reflection will tell you that it is a simple matter if you approach the child on his weak side, and tell him he may have an atomizer for himself, such as papa and mamma have, provided he is specially good. You may use albolene at first; then some favorite perfume or flavoring, and finally you can use some disinfectant agent. Let me say that in the families in which I have succeeded in installing this nasal toilet during the past five years there has not been one case of suppurative adenitis. I think that prophylaxis lies along this line.

Dr. Charles Gilmore Kerley, New York City—I agree with Dr. Southworth regarding most of the statements made.

It is only necessary to make use of a small opening. Unless some means of drainage is employed, this small incision is very apt to close in twenty-four or forty-eight hours, and will then require reopening.

The point of differentiation between tubercular adenitis and simple acute adenitis might perhaps have been brought out more clearly. I understood the author to say that tubercular adenitis was not frequently found under the fourth year. I should modify this statement somewhat. I have seen quite a few cases of tubercular adenitis in children under four years of age; hence, this is not a sufficient ground for differentiation. I should lay stress on chronicity. In acute adenitis there is always more or less fever, and the swelling is more rapid, and one, two or perhaps three glands are involved; in other words, there is a distinct localization, whereas if the process is tubercular there is much more apt to be a distinct chain of affected glands extending sometimes down even to the clavicle.

The treatment of the nasopharynx is excellent. I am glad to hear chlorate of potash advocated, for I know of no better remedy for internal use. I have learned, in cases of acute tonsillar inflammation, to depend on chlorate of potash, and I believe that whatever good the old iron and chlorate of potash mixture did in diphtheria is to be attributed to the chlorate of potash it contained. The chance of infection of the eustachian tube in nasal cleansing I believe to be considerable, and I do not allow my students to make use of any force. The patient is placed on the back and the fluid is dropped in, or perhaps an atomizer is used. There can be no doubt that bacteria may be forced into the tube by the use of the syringe. Four or five years ago, in one of the hospitals for infectious diseases in New York City, nasal irrigation was used very extensively by means of the fountain syringe, and during this period the aurist was kept very busy treating disease of the ear. This only confirms my own experience. I prefer simple oil or albolene medicated as the case may require, and this should be sprayed or instilled and not injected into the nose. With regard to the abortive treatment, I have had good results from the application of a small ice bag kept constantly on the parts.

Dr. R. B. Gilbert, Louisville, Ky.—It is probable that the majority of cases of cervical adenitis do not come from the nasopharynx; most of the cases I see are the result of injuries and abrasions about the scalp. This is especially true in connection with invasion of the superficial glands, as from eczema. We often meet with cervical adenitis arising from caries of the teeth. I agree with the essayist, however, regarding the value of stimulating and cleansing applications to the nasopharynx. This should certainly be the routine measure. I can not quite agree with all that has been said regarding local applications, for I believe that fewer local applications, with possibly the exception of the ice bag, the better. Warm applications and ointments I think should be excluded. Iodid of potassium used internally certainly favors absorption, and I believe when administered every three hours in the full doses for the age of the patient, will accomplish more than any of the local applications mentioned, even more than the stimulating applications referred to. This treatment should be begun and carried out as promptly as possible in order to preclude surgical operation and unsightly scars.

Dr. Everett J. Brown, Decatur, Ill.—The reintroduction of chlorate of potash to the therapeutics of disease is to me very instructive. When I studied medicine the teachers warned us against the use of this drug, claiming that it produced profound anemia. My father, being an old practitioner, used to employ the old iron and chlorate of potash mixture, but I avoided it for the reason just mentioned. The patients, however, began to ask me why I did not prescribe the old mixture. I then began using it without the iron and I found that it was very valuable. In recent years chlorate of potash has been used very freely again, and has been recommended in very large doses in habitual abortion. For this class of cases I am now using it in divided doses of two and a half drams per day.

Dr. C. F. Wahrer, Fort Madison, Iowa—We have been told formerly by the best authorities that chlorate of potash caused a great deal of disturbance of the kidneys in young children. I believe we should not turn lightly from one position to the other in a Section like this, because its published opinions carry great weight. We can not afford to use forcible irrigations, and particularly with a substance like hydrogen dioxid. I have seen this substance employed in half strength in a child's nostril. The explosion of such a substance may do a great deal of harm by its action on the eustachian tube and middle ear, forcing infections beyond our control. The cleansing by such an agent should certainly be done only by instillation. The older practitioners looked on these cases of cervical adenitis as one of the evidences of scrofula, and while I am not quite sure what is meant by scrofula at the present time, I am of the opinion that it is generally tuberculous. However, we must be still careful about heroic medication with chlorate of potash and in the use of forcible irrigations in patients of tender age.

Dr. William Carver Williams, Chicago—Has the author of the paper had any experience with mixed infection in these glandular cases? I recently had a case of typical adenitis, such as he described, which was treated by the small incision at the stage of pointing. It refused to heal and there was considerable discharge at first. In time the whole chain became indurated, and exhibited the evidence of tubercular inflammation, and these glands eventually required removal by operation.

Dr. James G. Mastin, Chicago—I have been in the habit of using chlorate of potash internally in suppurative conditions and locally in sore throat. I believe this remedy will limit the formation of pus in a suppurative adenitis, and that if it is begun early enough we can almost wholly prevent the formation of abscesses. I think that chlorate of potash may be given without fear if the kidneys are in a healthy state. The use of irrigations by means of the fountain syringe, etc., and atomizers I look on as bad practice because it involves more or less force in the application of the remedy. For the past year I have been using Pattison's nasal irrigator, with which we can apply as much or as little force as we like. By applying the irrigator to one nostril a thin stream of water will flow out of the opposite nostril and by closing it with the fingers and holding the mouth open a thin stream of water will pass through the nasopharynx and out of the mouth, thus closing the nasal cavities and post-nasal space. I have not recently made use of albolene or other oily preparations, for, although they are good, I believe that normal salt solution is superior to them all.

Dr. H. N. Leavell, Louisville, Ky.—With regard to tonsillar involvement: Very often, if we will pull back the anterior pillar of the fauces, we shall find a little crypt full of cheesy matter which has not been sufficient to cause an acute tonsillitis but has produced enough irritation to involve the lymph channels. This, it appears to me, is an etiologic factor of some importance. With regard to the abortive treatment of these cases of cervical adenitis, I may say that I employed such methods very faithfully some years ago in the hope of avoiding suppuration, but like Dr. Southworth, I failed, and I believe there is not much gained by local applications to these glands. He is certainly reaching the cause of the trouble with his cleansing applications to the nasopharynx, but we must not lose sight of the fact that the eustachian tube is present in this region and is much more pervious than in the adult, so that the infectious material is more likely to be transmitted to the internal ear. This emphasizes the need of great caution against the employment of force. I agree with the last speaker regarding the use of saline solution. I believe it is better for cleansing purposes than anything else, and that it hastens resolution of the inflammatory process in the nasopharynx. It might be advisable to follow it up with the use of albolene sprays.

Dr. A. C. Cotton—I wish to explain what I have said. I did not refer to treatment but to the prophylaxis of cervical adenitis when speaking of the toilet of the nasopharynx. The albolene atomizer to which I had reference was the one which nebulizes the albolene, and it is deposited like a fog on the parts. Absolutely no force is used in the application, and the albolene goes wherever the air current goes. This oily material protects against crusts and the concealment of colonies of bacteria.

Dr. T. S. Southworth—I spoke in my paper about the employment of the spoon because it can be used without any force. The nose and throat specialists say a great deal about the danger of applications which we make to children's noses and throats, and yet they are in many cases employing compressed air sprays. I am of the opinion that if fluids are simply allowed to percolate through the nose and cleanse the mucous membrane, unless the nose is forcibly blown at this time no harm will result. It is the extension of the inflammation along the tube which I believe causes most of the trouble.

With regard to differential diagnosis of tubercular and ordinary cervical adenitis I would say that tubercular adenitis rarely occurs before the fourth year. While this is not an absolute point of differentiation it is, I think, a useful one. I am glad to hear that there is such a general use of chlorate of potash for pharyngeal and nasopharyngeal affections. I have always felt some anxiety with regard to the use of this remedy, although I prize it very highly. I have used it always very cautiously, yet it was only last summer that I learned from a medical friend of a fatal acute nephritis with hematuria in a girl of 17 from the use of chlorate of potash. The girl had purchased the tablets for a cold, and had eaten them very freely, with the result stated. Such cases should at least make us very cautious. The cases in which iodid of potassium proves serviceable in my experience are chiefly those in which there is a persistent induration, or in cases having a specific taint. I have not found it of so much service in acute cases. I have not made use of the chlorate of potash locally. It is quite possible that some of the cases which are very persistent are those in which there is a specific element, or perhaps a mixed infection. Here also the use of chlorate of potash has seemed to be of advantage.

THE ESTIMATION OF UREA BY MERCURIC NITRATE.

J. H. LONG.
CHICAGO.

Since the original publications of Liebig on the use of a solution of mercuric nitrate in the urea estimation several attempts have been made to so modify the process as to render it more perfectly accurate for the purpose. Liebig himself recognized the variable character of the precipitate formed when a solution of mercuric nitrate is added to one of urea, even when the latter has a mean concentration of 2 gm. to 100 c.c. and the mercuric solution is dilute, with 1 c.c. about equivalent to 10 mg. of urea.

This irregularity depends in part on the liberation of free nitric acid in the operation, and Rautenberg and others[1] attempted to correct for this by the gradual addition of alkali in the form of calcium carbonate. In this paper the authors recommend to correct the direct result of the titration by subtracting 0.06 c.c. of mercury solution for each cubic centimeter below 30 employed in titration of 15 c.c. of the prepared urine (that is 10 c.c. of urine and 5 c.c. of the usual baryta mixture). For example, if, in a given titration, 22 c.c. were used the correction to be subtracted from 22 c.c. is 8×0.06=0.48, leaving practically 21.5 c.c. to be used in the calculation.

Pfeiffer[2] later confirmed the value of the Rautenberg method as against the criticisms of Pflüger and others. Pflüger[3] published an elaborate investigation of the whole question and proposed a more delicate correction as well as certain definite methods in performing the operations of the test. His work is the basis of the processes described in many of our text-books.

Gradually, however, it began to be recognized that the mercury solution combines with several substances besides urea, and that it measures really, in a certain sense, the total nitrogen of the urine. This fact, coupled with the somewhat complicated procedure and corrections of Pflüger, led finally to the practical abandonment of this simple method in favor of others which are apparently more accurate. The various hypobromite processes can not, of course, be included here; their use is limited to the roughest kind of clinical applications. But I refer to the methods described by Pflüger and his followers on the one hand, and by Mörner and Sjöqvist on the other, for the separation of the disturbing factors from the urea before the actual test is made. A study of the literature, however, reveals the fact that in all of these methods and their modifications corrections are still necessary, and that, in general, they are not suitable for use when a rapid and fairly accurate process is required in making routine tests in urine investigations where the other important constituents are measured at the same time.

It is unquestionably true that in the mercury titration process the chief source of error is found in the volumes of solution required by the chlorids, the ammonia and the creatinin. The correction for the first may be easily made after the chlorin titration, and in fresh urine an approximate correction may be introduced for the ammonia and the creatinin, if they are not accurately determined. In a former investigation[4] I have made a large number of ammonia, creatinin and uric acid determinations and have found the correction to be introduced in the urea estimation on account of the presence of these. The mean value of the corrections are seen from these figures:

6 mg. of ammonia in 20 c.c. require 1 c.c. of mercury sol.
7.5 mg. of uric acid in 20 c.c. require 0.15 c.c. of mercury sol.
14.0 mg. of creatinin in 20 c.c. require 0.85 c.c. of mercury sol.

The 20 c.c. in each case is supposed to be made up of 10 c.c. of urine and 10 c.c. of water or baryta solution. In employing the process at all, or in the determination of ammonia, it is necessary to keep in mind that only fresh urine can be used with accuracy, because of the fact that in decomposition urea yields ammonia.

The apparently complicated corrections in the process as recommended by Pflüger are an objection to its practical use. I have, therefore, sought to simplify the procedure and corrections as far as possible, which may be accomplished in this way: First, the mercury solution is made in the usual manner and so adjusted that 20 c.c. correspond exactly to 200 mg. of urea in 20 c.c. when the end reaction is found as follows: Spread a number of drops of normal sodium carbonate solution (53 gm. Na_2CO_3 to the liter) on a glass plate with dark background, and as the end of the titration is neared bring a drop of the mixture in the beaker alongside one of the carbonate drops and cause the two to mix on one edge. Part of the beaker drop is thus drawn over the carbonate, giving a precipitate; as soon as this appears distinctly yellow consider the process finished and dilute the mercury solution so that exactly 20 c.c. should be required to produce this reaction, it being assumed that the standard solution in the beaker contained exactly 200 mg. of urea in 20 c.c. If a paste of sodium bicarbonate and water is used for the end reaction, or if the colored precipitate is obtained on mixing the drops by stirring, a different result will be reached. But if the final reaction is always made as just explained it will be found most satisfactory and readily observed. The actual urine titration must, of course, be made in the same manner, starting with a volume of 20 c.c. of prepared filtrate. Care must be taken to use pure urea for the standardization. That sold by dealers as pure may not contain over 90 per cent. of urea.

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[1] Zeitschr. analyt. Chemie, 2, p. 90, 1863.
[2] Ibid., 24, p. 475, 1885.
[3] Ibid., 19, p. 375, 1880.
[4] Jour. Am. Chem. Soc., 23, p. 632, 1901.

ESTIMATION OF UREA.

Hg Sol. Used, c.c.	Urea Corresponding, mg.	Hg Sol. Used, c.c.	Urea Corresponding, mg.	Hg Sol. Used, c.c.	Urea Corresponding, mg.	Hg Sol. Used, c.c.	Urea Corresponding, mg.
10.0	95.41	17.6	174.70	25.2	254.88	32.8	336.02
10.1	96.44	17.7	175.76	25.3	255.94	32.9	337.10
10.2	97.47	17.8	176.82	25.4	257.00	33.0	338.17
10.3	98.49	17.9	177.88	25.5	258.06	33.1	339.24
10.4	99.52	18.0	178.94	25.6	259.13	33.2	340.31
10.5	100.55	18.1	180.00	25.7	260.20	33.3	341.39
10.6	101.58	18.2	181.05	25.8	261.26	33.4	342.46
10.7	102.61	18.3	182.10	25.9	262.33	33.5	343.54
10.8	103.64	18.4	183.15	26.0	263.39	33.6	344.62
10.9	104.66	18.5	184.20	26.1	264.45	33.7	345.70
11.0	105.69	18.6	185.25	26.2	265.52	33.8	346.77
11.1	106.72	18.7	186.30	26.3	266.59	33.9	347.84
11.2	107.75	18.8	187.35	26.4	267.66	34.0	348.92
11.3	108.78	18.9	188.40	26.5	268.73	34.1	350.00
11.4	109.81	19.0	189.45	26.6	269.80	34.2	351.08
11.5	110.84	19.1	190.50	26.7	270.86	34.3	352.16
11.6	111.86	19.2	191.55	26.8	271.92	34.4	353.25
11.7	112.89	19.3	192.60	26.9	272.98	34.5	354.34
11.8	113.92	19.4	193.65	27.0	274.04	34.6	355.43
11.9	114.95	19.5	194.70	27.1	275.10	34.7	356.52
12.0	115.98	19.6	195.76	27.2	276.16	34.8	357.61
12.1	117.01	19.7	196.82	27.3	277.22	34.9	358.70
12.2	118.04	19.8	197.88	27.4	278.28	35.0	359.79
12.3	119.07	19.9	198.94	27.5	279.34	35.1	360.88
12.4	120.10	20.0	200.00	27.6	280.41	35.2	361.97
12.5	121.13	20.1	201.05	27.7	281.47	35.3	363.08
12.6	122.16	20.2	202.10	27.8	282.54	35.4	364.17
12.7	123.19	20.3	203.15	27.9	283.61	35.5	365.25
12.8	124.22	20.4	204.20	28.0	284.67	35.6	366.33
12.9	125.25	20.5	205.25	28.1	285.73	35.7	367.42
13.0	126.29	20.6	206.30	28.2	286.80	35.8	368.50
13.1	127.32	20.7	207.35	28.3	287.87	35.9	369.59
13.2	128.35	20.8	208.40	28.4	288.93	36.0	370.68
13.3	129.38	20.9	209.45	28.5	290.00	36.1	371.77
13.4	130.42	21.0	210.50	28.6	291.06	36,2	372.85
13.5	131.47	21.1	211.55	28.7	292.12	36.3	373.93
13.6	132.52	21.2	212.61	28.8	293.19	36.4	375.01
13.7	133.58	21.3	213.67	28.9	294.26	36.5	376.09
13.8	134.63	21.4	214.73	29.0	295.32	36.6	377.17
13.9	135.69	21.5	215.79	29.1	296.38	36.7	378.25
14.0	136.74	21.6	216.85	29.2	297.45	36.8	379.33
14.1	137.79	21.7	217.90	29.3	298.52	36.9	380.42
14.2	138.85	21.8	218.95	29.4	299.59	37.0	381.51
14.3	139.90	21.9	220.00	29.5	300.66	37.1	382.60
14.4	140.95	22.0	221.05	29.6	301.73	37.2	383.69
14.5	142.00	22.1	222.10	29.7	302.80	37.3	384.78
14.6	143.05	22.2	223.15	29.8	303.87	37.4	385.87
14.7	144.10	22.3	224.20	29.9	304.94	37.5	386.96
14.8	145.15	22.4	225.25	30.0	306.01	37.6	388.04
14.9	146.20	22.5	226.30	30.1	307.08	37.7	389.12
15.0	147.25	22.6	227.35	30.2	308.14	37.8	390.20
15.1	148.29	22.7	228.40	30.3	309.20	37.9	391.28
15.2	149.34	22.8	229.45	30.4	310.26	38.0	392.37
15.3	150.39	22.9	230.50	30.5	311.33	38.1	393.46
15.4	151.46	23.0	231.55	30.6	312.40	38.2	394.55
15.5	152.53	23.1	232.60	30.7	313.47	38.3	395.64
15.6	153.60	23.2	233.65	30.8	314.54	38.4	396.73
15.7	154.66	23.3	234.71	30.9	315.61	38.5	397.82
15.8	155.73	23.4	235.77	31.0	316.68	38.6	398.91
15.9	156.80	23.5	236.83	31.1	317.75	38.7	400.00
16.0	157.86	23.6	237.89	31.2	318.83	38.8	401.09
16.1	158.93	23.7	238.95	31.3	319.90	38.9	402.18
16.2	160.00	23.8	240.01	31.4	320.97	39.0	403.27
16.3	161.05	23.9	241.07	31.5	322.04	39.1	404.36
16.4	162.10	24.0	242.13	31.6	323.11	39.2	405.45
16.5	163.15	24.1	243.19	31.7	324.19	39.3	406.54
16.6	164.20	24.2	244.25	31.8	325.27	39.4	407.63
16.7	165.25	24.3	245.31	31.9	326.35	39.5	408.72
16.8	166.30	24.4	246.36	32.0	327.43	39.6	409.81
16.9	167.35	24.5	247.43	32.1	328.51	39.7	410.90
17.0	168.40	24.6	248.50	32.2	329.59	39.8	411.99
17.1	169.45	24.7	249.57	32.3	330.66	39.9	413.08
17.2	170.50	24.8	250.63	32.4	331.74	40.0	414.17
17.3	171.55	24.9	251.70	32.5	332.81		
17.4	172.60	25.0	252.76	32.6	333.88		
17.5	173.65	25.1	253.82	32.7	334.95		

With a mercury solution so adjusted I have made the following determinations. In each case a solution of urea in 20 c.c. of water was used and the end reaction was found as described. No neutralization was made, as part of the object of the experiments was to determine how to avoid this:

Urea in 20 c.c.	Hg sol. required.	Urea cor. to 1 c.c. of Hg solution.
100 mg.	10.45 c.c.	9.57 mg.
200 mg.	20.00 c.c.	10.00 mg.
300 mg.	29.47 c.c.	10.18 mg.
400 mg.	38.72 c.c.	10.33 mg.

The numbers in the second column are the means of many closely agreeing experiments. Those in the third column show the increase in the precipitating value of the mercuric solution. The value, y, of 1 c.c. of this solution for urea solutions containing from 1 to 4 gm. in 100 c.c. is given by the following interpolation formula derived from the observations:

$$y = 8.66 + 1.217x - 0.345x^2 + 0.03665x^3$$

By the aid of this formula and a curve drawn from the observations I have calculated the table given, in which the amounts of urea corresponding to different volumes of the mercury solution used are stated. The application of this table presupposes the use of a standard mercury solution, adjusted as explained above, and, further, that the titration is always made as recommended. The volume of mercury solution to be employed in the calculation is that which remains after subtracting from the total volume used the amounts used by the chlorids, uric acid, ammonia and creatinin, as shown in a short table above. In my own laboratory the method has been followed with excellent results.

In preparing urine for the test, I use 25 c.c. and mix with an equal volume of the usual baryta solution, accurately measured. The mixture is poured through a dry filter, and of the filtrate 20 c.c. is taken for the titration. This must be neutralized exactly with nitric acid, of which a drop or two is enough. Throw a bit of litmus paper into the filtered liquid and add the dilute nitric acid by means of a glass rod until neutrality is reached. The liquid is then ready for the mercury titration as described.

Northwestern University Medical School.

Personalities vs. Organization.—Every physician either is or is not honest and honorable and ethical, so far as the practice of his profession is concerned. If he is honest and honorable in his professional work, he should be a member of his local and state society; if he is not, he should not be permitted to join such societies nor to retain his membership in them if he has already joined. But no question other than professional integrity should be allowed to enter into the matter of medical society membership. Personal differences of opinion, envy, hatred or malice, likes or dislikes, nor race, school nor religion should so much as be thought of when the one great question of professional organization and of membership in the local and state medical societies is considered. If there must be squabbles, let them be outside; let medical organization be on the broadest possible lines, for professional honor and advancement, and for the benefit and protection of all honest and honorable professional men, no matter what their personal differences may be. Let us have a state society so big that personalities will be lost in it.—*California State Journal of Medicine.*

A Just Protest.—The *Medical World* of recent date contains a lengthy editorial instructing physicians how to extract teeth, describing the outfit needed, and urging them to take up the work. The article does not contain a word about what teeth should or should not be sacrificed. What would a physician think of a dental journal which advised dentists to perform amputations of various parts of the body, simply as a means of increasing their income?—*Dental Digest.*

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THE CLINICAL SIGNIFICANCE OF ALBUMOSURIA.

Despite all modern methods of diagnosis the decision as to whether pus is or is not present, hidden in some unexplorable locality, continues to fret the diagnostician. The determination of the leucocyte count has not been as valuable as it promised to be, according to many, and at the best it is often inconclusive when a positive help is most needed. Any means that may assist in deciding this point is certain to attract attention, and we predict a general interest in the recent article of T. J. Yarrow, Jr.,[1] which considers the question of albumosuria as an aid in determining the presence or absence of suppuration, based as it is on extensive investigations by the author. Albumoses may get into the blood in a number of conditions, and even if only in small amounts they seem to enter the urine usually. The albumoses formed in normal digestion are ordinarily changed into something different while passing through the intestinal wall, but in case there is an area in which the intestinal epithelium is absent, as in ulcerative processes, they may pass into the blood unchanged and appear in the urine. The peptone that always accompanies the albumose in ordinary digestive processes seems to be more readily destroyed in the body than the albumose, for true peptone seems never to occur with the albumose in the urine. With the exception of this faulty intestinal absorption, albumoses are present in the urine only as a result of self-digestion of tissues in the body; conversely it may be said that whenever any considerable amount of dead tissue is undergoing softening at a fairly rapid rate, albumosuria may occur. Softening of dead tissues does not differ greatly from their digestion in the alimentary tract, for in each case similar proteolytic enzymes are producing similar splitting products, among which is the albumose. Although all tissues contain more or less active proteolytic substances, when softening is at all rapid it will be found that the leucocytes are taking a prominent part, not so much through phagocytosis and intracellular digestion, as we once thought, but more by extracellular digestion by enzymes that they liberate. Hence the rapidity of softening, and therewith the probability of albumosuria, will vary directly with the number of leucocytes attracted to the spot. For example, an aseptic infarct will soften much more slowly than a septic infarct, not chiefly because bacteria are present to destroy the dead tissue, but because the bacteria attract the leucocytes; similarly a tuberculous area is slowly or not at all absorbed because it does not attract leucocytes in any considerable number.

In view of these facts it is evident that albumosuria may occur under many and varied conditions, of which suppuration is but one, although the most prominent. For example, while the uterus is undergoing involution considerable quantities of albumose may be found in the urine, i. e., during the first three weeks after childbirth. Evidently, then, as with the leucocyte count, it is one thing to determine the existence of the symptom and another to draw proper conclusions. A simple method of detecting albumose is the first desideratum, and Yarrow recommends a solution of salicyl sulfonic acid, which produces with albumose a solution that clears up on heating; while the precipitate with other proteids becomes denser when heated. Again, it is important that a fresh specimen of urine be examined, since albuminous urines are soon digested by bacteria with production of albumoses. As a rule, the conditions that might cause albumosuria aside from suppuration can be excluded, and then the determination of this substance becomes of positive value. The instances of its usefulness are too familiar to need to be recalled, but, of course, appendicitis is prominent; here, Yarrow says, not only may the onset of suppuration be determined, but also the time of its safe encapsulation is indicated by the stoppage of absorption and elimination of albumose. If this is a general rule it will prove a great aid in determining the time of election for many sorts of operations. Another instance of the value of this symptom is seen in meningitis, for the tuberculous form will not produce albumosuria as does the suppurative. Resolution of pneumonic exudate, although entirely different from suppuration in its results, is chemically much the same as suppuration, and the albumosuria of resolving pneumonia has long been known. Of special interest to physiologists is the study by Yarrow of the urine of "over-feeders," for the failure to detect albumose indicates that the intestinal wall when normal can take care of all the albumose produced even with excessive diets.

It will be granted that albumose is not sought for in routine urinary examination by more than a very few, and since this symptom promises to be of value it is greatly to be hoped that Yarrow's work will lead others to study the occurrence of albumosuria, for in the matter of pathologic urine it is particularly true that only the accumulated results obtained in great numbers of cases by many investigators are of permanent value.

In passing we may mention the condition known as "Bence-Jones' albumosuria," about which a number of articles have been recently written, for it is to be distinguished from the true albumosuria of tissue disintegration. The Bence-Jones bodies, as the substance is more properly called, are not a true albumose at all, but, according to Simon,[2] it is more closely related to the water-soluble globulin. It is characterized by being coagulated by a relatively low heat, 58 C., as true albumose does not, and redissolving when heated higher, the precipitate again appearing when the urine is cooled down. Occurring as it does chiefly with the rare bone tumor, multiple myeloma, it seems to bear no relation to true albumosuria. Those interested in the subject are referred to the above article by Simon, and to articles by Bradshaw[3] and Boston,[4] where references to the literature will be found.

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[1] American Medicine, 1903, v, 452.

[2] Amer. Jour. Med Sci., 1902, cxxiii, 939.

WHAT IS THE PROPER FUNCTION OF PUBLIC BOARDS OF HEALTH?

This question may well be raised at the present time, when it appears that health officials hold widely divergent views as to the proper scope of their activities. We take it that no physician will care to contend that the function of such boards is in any degree concerned with the health or well-being of any political party, although occasionally the solicitude of such a board for the success of the dominant party or its eagerness to oblige party leaders might suggest another view.

Setting aside, then, the always sinister influence of politics on the work of such a body, for what should a department of health stand? First, we must take for granted its strictly preventive functions. It must enforce vaccination and quarantines. It must abate nuisances. It must vigorously enforce the health laws and ordinances. But this is only a beginning. If it is the function of such a department to conserve the public health, then its scope and power must be constantly widened with the growth of the city, the development of the country and the growth of the science of sanitation. Nothing will compensate for the lack of a vigorous, fearless, scientific grappling with the difficult but immediate problems of public health and sanitation. It is to its board of health that a city should look for leadership, at least for co-operation, in the solution of the housing problem, for action in the prevention of tuberculosis, for fearless abatement of the nuisances created by certain great business concerns, such as glucose and rendering factories and various of the enterprises connected with abattoirs, for supervision of the health of school children and of the sanitary conditions in factories and stores where its citizens spend their working hours. Does this sound fanciful? It is merely a brief suggestion of the work of the New York Board of Health at the present day. If the board of health in any town lacks the power and equipment to carry out such a program its first duty is to make that fact known. If this is done in a manly and convincing manner there is no danger that popular response will fail.

Let us imagine, further, the value of a health campaign vigorously carried on by a state department of health. State universities employ teachers to travel over the state, to speak in every county on the health of cattle and the vigor of corn and the care of the soil. Why should not the state board of health send out teachers to speak on health and sanitation? If there were some popular knowledge of the premonitory symptoms of nervous breakdown our state insane asylums would soon feel the relief, and, in mere dollars and cents, the state would be repaid for its teaching.

City and state boards of health examine bacteriologic specimens for physicians free of charge. Why should not these boards also examine those conditions of water supply and sewage disposal, whose imperfections too frequently spread disease; why should they not distribute information in the remoter districts by means of lecturers and bulletins covering those simple precautions which would stay the spread of tuberculosis?

A public department of health should be not only an executive body administering laws and ordinances, making investigations, gathering and publishing reliable statistics, but it should be a great aggressive organ of popular education regarding personal and public hygiene, and all that pertains to public health and physical well-being.

THE PROTECTION OF THE BODY AGAINST ITS OWN DIGESTIVE FERMENTS.

Among the "old questions that are ever new" is the immortal problem: Why does not the stomach digest itself? A recent revival in interest is now evident; due to new observations along two lines, one of which is the demonstration of the presence of proteid-digesting enzymes in all the cells of the body, the other the direct study of "antiferments." Since it has been shown that all cells are capable of digesting themselves, after death of the tissue that contains them, the question naturally arose why they were not similarly digested during life. One of the popular solutions of the problem of the stomach and its failure to commit self-digestion was that the alkalinity of the blood in the walls of the stomach prevented the pepsin from acting on them, since it required an acid medium. But the fact that pancreatic trypsin acts best in alkaline medium rendered this explanation futile when applied to the conditions of self-preservation of the intestines, and the same thing applies to the autolytic ferments of the tissues. An ingenious method of attacking the problem lies in the ability of intestinal parasites to live in the active digestive fluids of the alimentary tract without suffering harm. That they are not impervious to the alimentary fluids is evident, since they obtain their nourishment by absorption from these fluids. As early as 1878 Fredericq observed that round worms from the dog's intestines could live for many days outside the body when kept in a solution of pancreatic juice. The early authors considered that the living tissues resisted the action of digestive ferments in the same way that they resisted the action of stains and of other substances, but this was more of a substitution of one problem by another than an explanation. E. Weinland found that not only do parasites resist the action of trypsin, but that they also rendered it incapable, to greater or less degree, of digesting other substances, and he thought tha sites protected themselves by producing an antibody for the ferment, an "antitrypsin." Dastre and Stassano[1] have followed the study of the defense of the tenia serrata of the dog still farther, and seem to have proved very nicely the method of protection. As has now become well established, the pancreatic juice as first secreted from the gland is usually quite inactive to proteids. Its proteid-digesting enzyme is in an inactive form, trypsinogen, and needs to be acted on by the intestinal juice before it is changed into the active trypsin, this change being accomplished by the enterokinase of the intestinal secretion. Dastre and Stassano found that if an extract of the tenia was permitted to act on enterokinase about four hours, the effect was that the enterokinase was unable to render fresh pancreatic juice active. On the other hand, if the tenia extract acted on fresh pancreatic juice, and this later was added to enterokinase, it became active almost as if untreated. Further, if the enterokinase and pancreatic juice were left to act on each other for a time and then treated with tenia extract digestion is active, although less than in the controls. Therefore, it seems that the tenia extract prevents the enterokinase from activating the trypsinogen, rather than interfering with tryptic action.

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[3] Lancet, Oct. 4, 1902.
[4] Amer. Jour Med. Sci., October, 1902.

Fermi first showed that fresh blood serum not only was not digested by pancreatic juice, but that it attacked and destroyed its tryptic enzyme, an observation that has since been abundantly verified. Here again the action seems directed more against the enterokinase than against the trypsin. Delezenne[2] finds that serum not only checks enterokinase, but also the substances that occur in leucocytes, bacteria and venoms that have similar activating effects on trypsinogen. This power of normal serum to prevent the action of ferments seems to be quite as general as it is remarkable. For example, Simnitzky[3] finds that papain is similarly affected, and that the serum of animals immunized to certain bacteria is not only antagonistic to the proteolytic ferments of the specific bacteria, but also to similar ferments of other bacteria.

On the basis of these observations it would seem that the tissues do not digest themselves and each other because they contain something that prevents the action of the digestive ferments. But since it is shown that this antibody does not affect the ferment that has been made active, but is only effective against the kinase, being in fact an antikinase, it seems to us that the problem is quite as open as before, for in the alimentary tract the parasites and the intestinal walls come in contact with large quantities of active ferment. Jacoby's demonstration that the ferments of the tissues are specific for their native tissues also fails to explain why the tissues are able to digest themselves when they are dead, but not when alive, except on the assumption that during life the circulation restores the equilibrium as fast as the intracellular enzymes break it down. The leucocytes also show a great power to digest proteids of all sorts, not only themselves, but also the other tissues, and even foreign substances like catgut sutures, provided only that the proteid is dead proteid. It seems to us that so far the antiferments, interesting and important as they are, have failed to explain the riddle of the failure of self-digestion of the body by its own enzymes.

TO PREVENT ADULTERATED DRUGS.

It has been decided by the Attorney-General of New York that the State Board of Pharmacy has the right to take samples from drugs kept for sale by druggists to determine whether they are pure and of the quality established by the Pharmacopeia. There was evidently some opposition to this, but the recent publication of the Board of Health on the extent of cheating shows its necessity. It would be an excellent thing if similar bodies in other states exercised the same authority and carried it out in practice. The amount of damage done by adulterated drugs can only be imagined, but it must be a serious one in the light of such facts as were brought out in New York. Things are probably equally bad in other states and the remedy is just as applicable.

LIQUOR SELLING BY DRUGGISTS.

According to the *Western Druggist* the last New York legislature passed a law regarding the sale of liquor by druggists which permits its sale, without a physician's prescription, in quantities of less than one pint, with a state revenue stamp fixed to the package. As a preventive of too regular or too frequent sales, the provision is included that not more than one sale can be made to the same person in the same twenty-four hours. We do not know whether this law is a concession to the patrons or to the druggists. If the former, it is a fraud in prohibition communities, nullifying the will of people, and if the latter, it indicates a greater degeneracy of the pharmaceutical profession in New York than we like to think probable. The sole function of the druggist in the sale of liquor should be to provide it as medicine when prescribed by medical authority. If he is allowed to sell it to whoever asks, he is practically on the level of the dramshop keeper and nothing better. The sale of liquor should be under direct police regulations, and to permit it as an unguarded function of pharmacists destroys this essential feature. The New York law appears to us to be a distinct step backward and it ought to have the opposition of the licensed liquor sellers as well as the temperance public generally.

DEEDS OF DARKNESS.

Though Armstrong was duly sent up, not exactly in a chariot of fire, his mantle seems to have fallen on others, this time in the East. There exists at present, according to the *Baltimore News* of May 6, in that city a rather sacrilegiously named institution, the "Christ's Institution Medico-Chirurgical and Theological College," conducted by six colored men, an establishment which gives all sorts of degrees, and especially medical ones. When incorporated in 1900 it had only one M.D. among its organizers, and he signed his mark instead of his name. Now they all have M.D.'s, besides D.D., B.D., etc., *ad nauseam*. The man who could not sign his name in 1900 now appears as a Bachelor of Arts, Master of Arts, Bachelor of Divinity and Doctor of Philosophy. He is also professor of "linguistal," whatever that is. The degree of B.D. is given for $5 and a certain amount of study. Candidates for M.D. and D.D. apparently pay $50 per annum for their instruction. There is also a nurses' school attached to the concern that graduates its trained nurses. The establishment is in full blast and considerably patronized, not only by candidates for degrees, but by patients from the poor whites and colored people of the neighborhood. All this is almost directly under the shadow of the Johns Hopkins University It reminds one of the byway to sheol described by Bunyan under the walls of the celestial city.

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[1] Comptes Rend. Soc. Biolog., 1903, No. 3, p. 130.
[2] Ibid., p. 132.
[3] Prager Med. Wochenschr., Sept. 11, 1902.

HYDROPHOBIA.

We regret to see a regular medical journal indulging in sneers of "ignorant clamor" against hydrophobia. Hydrophobia is a reality, and a very serious one, and not all the sentiment or pseudo-benevolence of the zoophiles can disturb this fact. The destruction of all wandering dogs and all the pampered pets in our large communities would not compensate for the loss of a valuable human life destroyed through their agency. It is hard to see why a muzzling law can never be enforced; it has been enforced in Great Britain with the result of practically stamping out hydrophobia in that country. The editor of the monthly journal referred to remarks that the statistics of the New York Board of Health will probably show that perhaps two persons died of the infection from dog bites in four years. We can not dispute this from actual knowledge of the facts, but if statistics show that there were only two deaths from rabies in four years in New York, either the statistics are very far from being reliable or else New York has a much better record than other cities in this country. The fling at the New York Medical Association is unworthy. The Association is in much better business in agitating against hydrophobia than is the journal in belittling the importance of the disease and encouraging a false sense of security which may prove fatal to innocent individuals.

"DRUGS THAT ENSLAVE."

A short time ago we noticed some rather striking and alarming statements made in newspapers in regard to cocain addiction. Also in a recent number of the *Philadelphia Medical Journal* Dr. Simonton of Pittsburg gave an account of the spread of cocain under his observation. From the facts given by him, as well as those obtained elsewhere, it seems that the introduction of this drug to the public has been, and is likely to be still, a curse to the community. Its therapeutic advantages, and they are not slight, are hardly balanced by the evils that may come from its self-prescription. It is especially among the lowest classes that its use seems to be most general, though others are not exempt; Simonton speaks of even railway employes being victims to the habit. The negroes of the South, in the cities especially, seem to be becoming devotees of the cocain habit. The facts brought out would necessarily imply that certain druggists have been criminally active in making profit by spreading the sale of cocain. Some physicians have perhaps in the past thoughtlessly prescribed cocain in such a way that the patient has had it renewed and thus set up the habit. It is a matter that deserves the attention of the members of the medical profession, and they can not neglect it. Cocain is an attractive drug to prescribe, for its effects are so quick and decided, but it is, at the same time, one of the most dangerous tools we can use. Cocain addiction, however, is not the only vice that seems to be growing. In fact, a certain portion of the public seem bound to intoxicate themselves with almost every abomination that can produce a temporary effect. It is said that boys in some eastern cities have gotten into the habit of fuddling with gasoline, stealing it from suburban street lamps or from tank cars. In a recent case a boy in attempting this was blown up, the explosion injuring at the same time several others who were with him.

Medical News.

COLORADO.

Banquet to Dr. Tillmanns.—Dr. Henry Tillmanns, Leipsic, who is visiting America, was given a banquet at the Antler's Hotel, Colorado Springs, by Dr. B. P. Anderson of that city. A number of the profession were present, and toasts were responded to. The famous surgeon spoke in great appreciation of the reception extended to him in this country.

ILLINOIS.

Diseases at Bridewell.—Dr. Sceleth, physician at the Bridewell, Chicago, reports 82 patients in hospital, including 19 cases of pneumonia and 24 of delirium tremens.

New Trades Union.—Hospital attendants and nurses at the Cook County Institutions, Dunning, met, May 12, and organized a union with an initial membership of 160.

To Complete Hospitals.—The legislature has appropriated $200,000 for the completion of the hospital for the incurable insane at Bartonville, and $200,000 for improvements at the insane hospital at Watertown.

Personal.—Dr. and Mrs. William S. Pearce, Waukegan, celebrated their golden wedding anniversary, May 16.——Dr. and Mrs. H. H. Deming, Chicago, have returned after spending the winter in Cuba and Florida.——A banquet was tendered Dr. T. J. Bluthardt, Chicago, newly-appointed consul to Bonn, prior to his departure for his post of duty.——Dr. David M. Paulson, Chicago, sailed for Europe, May 15.

Osteopathy Bill Vetoed.—The governor has vetoed the bill which provided that:

> Licenses to practice osteopathy shall be granted by the state board of health to all applicants of good moral character who pass the regular examination of such board in anatomy, histology, physiology, obstetrics, gynecology, pathology, urinalysis, toxicology, hygiene and dietetics, diagnosis, theory and practice of osteopathy, and present to said board a diploma from a regular college of osteopathy maintaining the standard of the associated colleges of osteopathy in its requirements for matriculation and graduation, and requiring personal attendance for at least four terms of five months each.

Chicago.

Care for the Babies.—The department of health notes a decrease in the death rate last week among infants under one year of age, and considers it, in part at least, due to the urgent crusade now being made for pure milk. The department is circulating in seven languages directions for securing and recognizing good milk and caring for it before use.

Too Emphatic Statements.—Dr. T. S. Middleton, Chicago, who is given in Polk's directories as being both "R." and "H." and has having graduated at the Medico-Chirurgical College of Philadelphia in 1897; in the Illinois Medical Blue Book "Royal Coll., London; Wurzburg Univ.; Vienna Medic.; Chi., Phila., 1880. 1884, 1888," is evidently desirous of still more notoriety, as the following will show:

CHICAGO, May 26, 1903.

To T. S. Middleton, M.D.:—I have been reluctant to believe that you were correctly quoted in recent interviews published in some of the Chicago newspapers. But the report made to me yesterday by Dr. W. K. Jaques, director of the city laboratory, and corroborated by a reporter, leaves no room for further doubt that the interviews as published were substantially correct, or, as you said to Dr. Jaques on Friday evening, "all true and much more," implying that you had not told the worst.

Briefly summarized, and largely in your own language, your statements are as follows:

"Within the last month I lost twelve babies with something like marasmus. Then I began to analyze the milk and found formalin in every bit of it." "I found as much as three parts of formalin to ten of milk." "I use lime and blotting paper" in analyzing for formalin.

"There were nearly 125 deaths of milk fed infants and children on Wednesday of this week."

Each and every one of these sensational and mischievously alarming statements is absolutely and unqualifiedly false.

You have reported "within the last month" not one death of a baby to the bureau of vital statistics, as you are required to do by the state law and city ordinance with all deaths occurring in your practice. The only death you have reported since April 20 was that of a woman 77 years old, died on May 14.

You have failed to furnish any clew whatever to the identity of any one of these "twelve babies," although you promised to do so. Inquiry shows that you have not referred any one of these alleged deaths—due, as you assert, to formalin poisoning—to the coroner for investigation, as you are also required by the law to do in all cases of suspected poisoning.

You have not found "as much as three parts of formalin to ten of milk," and this mixture fed to one of your "twelve babies." In much less proportion formalin curdles milk and the formaldehyd gas given off would instantly strangle any person, baby or adult, who should try to swallow it.

You have never found formalin in any milk by your "lime and blotting paper" method. It is a chemical impossibility—an absurdity.

The standard and approved test for formalin is sulphuric acid, and in the thousands of examinations made for this agent by the laboratory it has never been found in greater proportion than one part of formalin to 10,000 parts of milk. And yet the test is so delicate and conclusive that it has been found in so small a proportion as 1 to 1,000,000 parts of milk, and the dealer was prosecuted and convicted on this evidence. "Lime and blotting paper," forsooth.

There were not "nearly 125 deaths of milk fed infants and children" last Wednesday, and you have no possible means of knowing on any given day how many deaths, even "nearly" there were on that day. The total deaths under 5 years of age for the whole week was 178—including those who died from convulsions, diarrheal diseases, diphtheria, measles, scarlet fever, and whooping cough. The highest number of deaths of infants and children under 5 years reported during the week was 43 on Monday, the 18th, but even the registrar of vital statistics could not know that until the following day.

In defense of the reputation of the city, which you have so recklessly assailed as one in which infant and child life is needlessly sacrificed; in justice to this department, whose working efficiency and morale have been impaired by your statements and others as baseless and mischievous; and in the interest of all honorable members of the medical profession—it becomes my duty to prefer charges against you before the State Board of Health for "unprofessional and dishonorable conduct," within the meaning and intent of the medical practice act, to the end that your license to practice medicine in the State of Illinois may be revoked. I am, sir,

Arthur R. Reynolds, M.D.,
Commissioner of Health.

KENTUCKY.

State Board of Health Officers.—On May 22 Dr. J. M. Mathews was re-elected president for two years; Dr. J. N. McCormack, secretary for four years; Dr. F. T. Eisenman, state veterinarian.

Cross-Border Troubles.—Dr. A. P. Hauss, New Albany, Ind., has protested against a decision of the Kentucky State Board of Health that he could not reside in New Albany and practice in Louisville, the ground for the refusal being the ruling of the Indiana State Board refusing residents of Kentucky a license to practice in Indiana, the language of the laws being identical in the two states.

Bad Water.—Secretary McCormack, in his report before the State Board of Health, referred in an exhaustive manner to the epidemics of smallpox in the state, the sources of the same, the difficulty of having many county courts pay the expenses of stamping out an epidemic, and the use of humanized virus in the country districts. Attention was called to the pollution of water supplies and a suggestion was made that the legislature be petitioned to pass stringent laws governing this question. A free examination of suspected water will be made by the state college if sent by a county board of health.

Sanitation in Railway Cars.—The annual meeting of the State Board of Health of Kentucky was held May 22 with a full attendance. President Mathews, in his report, referred to the necessity for action in regard to the sanitary condition of sleeping cars and day coaches. The report of the special committee on this question was heard, after which attorneys for the Pullman Car Company and the railroads asked for a hearing, which was granted. A special committee was then appointed to draw up regulations for the disinfection of cars to be referred to a called meeting of the board in June for final adoption.

MARYLAND.

The Biological Laboratory at Beaufort, S.C., will be under the directorship this year of Dr. Caswell Grave of Johns Hopkins. A large number of members of the graduate department of biology will spend the summer there in special research.

New Eastern Shore Hospital.—The cornerstone of the new hospital at Cambridge was laid May 26. The contract price is $35,000. Mr. John E. Hurst, a merchant of Baltimore, gave $25,000 of this. It is expected to be ready for patients by June 1, 1904. The present hospital is in two dwellings, and has fifteen or twenty beds.

Baltimore.

The deaths last week numbered 198, being an annual rate per 1,000 of 18.44 (white 16.03, colored 31.70). Consumption and pneumonia caused 24 and 18 deaths respectively.

Eastern Dispensary Staff.—The following were elected as the medical staff of the Eastern Dispensary, May 19: Dr. R. S. Kirk, superintendent, Drs. A. Hebb and A. L. Tumbleson, assistants.

The new staff of the Maryland General Hospital, connected with the Baltimore Medical College, consists of Dr. J. M. Delavett, resident physician, and Drs. W. G. F. Olmstead, A. W. Nelson, S. T. Cavins, E. G. Bray and H. M. Hutchins, assistants.

New Quarantine Building.—The board of estimates has appropriated $6,383 from the contingent fund for the erection of a detention barracks at quarantine. The building will accommodate 100 persons and will have four wards, one for each sex of each color.

The Charles Frick Research Fund has, by the beneficence of some citizens, been founded at the University of Maryland, the object being to found a memorial of this great investigator, who lost his most promising life forty-three years ago from diphtheria. It is an appropriate way to perpetuate his memory by reviving and perpetuating in the university where he gained his fame, those researches in diseases of the blood, urine and fevers which immortalized him a half century ago.

At St. Joseph's Hospital the resident surgeons for the next two years will be Dr. W. L. Burke, Baltimore Medical College, 1902, and Dr. W. E. Kurtz, University of Maryland, 1903. The resident physicians will be Dr. T. J. O'Donnell, University of Maryland, 1903, and Drs. J. A. Chatard and J. F. Fisher, both of Johns Hopkins, 1903. Of the old staff Dr. T. M. Green has gone to Wilmington, N. C.; Dr. Frank K. Boland to Atlanta, Ga.; Dr. W. E. Dolan to Boston, and Dr. H. J. Kearny to a New York hospital.

Personal.—Dr. Hector H. Goodman has returned from an extended tour through Europe and Palestine.——Dr. Charles H. Tilghman has been elected vice-president of the Queen Anne's Railroad Company.——Dr. Ira Remsen, president of Johns Hopkins University, was one of the speakers at the centennial of Justus Liebig's birth in New York, giving his personal reminiscences of the great chemist.——Dr. C. B. Farrar of the staff of the Sheppard and Enoch Pratt Hospital, has had his leave of absence extended so that he may continue his studies in physiologic psychology abroad. He has declined an appointment in one of the psychologic laboratories under the Carnegie fund.——Drs. Seymour D. Ludlam and Glanville G. Rusk, of the same institution, have been offered and have accepted positions, the former as assistant physician at the Friends' Asylum, Frankford, Pa., the latter as assistant in the laboratory of the New York State Hospital for the Insane, Ward's Island.——Drs. Franklin P. Mall and Warren H. Lewis sailed for Europe, May 25.——Dr. Jas. Bordley, Jr., sailed for Europe, May 30.

The graduating class at the University of Maryland School of Medicine number 96. The commencement was held May 19, Prof. Francis P. Venable of the University of North Carolina being the orator. The president of the class was Dr. A. L. Wilkinson. The prize winners were: First, Dr. Howard S. Holloway, Maryland; certificates of honor were given to Drs. J. Rosett, Maryland; G. C. Lockard, Maryland; E. H. Mullan, Maryland; F. C. Moor, Florida, and F. G. Wright, Virginia. Appointments were made as follows: Assistant resident physicians, University Hospital, Drs. H. S. Holloway, C. T. Young, and F. G. Wright; assistant resident surgeons, University Hospital, Drs. A. M. Shipley (reappointed), E. H. Mullan, W. Alstead and W. R. Hunter; assistant resident gynecologists, Drs. W. K. White, H. W. Brent and R. W. Fisher; resident pathologist, Dr. F. W. Weed. Drs. C. T. W. Sappington and J. H. Iglehart were appointed resident physicians at the

Maternity Hospital, and Dr. A. L. Wilkinson, assistant resident physician at Bayview Hospital.

MASSACHUSETTS.

Vaccination Suit Fails.—A suit brought against the town of Hyde Park by two children because they were excluded from school, through failure to comply with the school regulations in regard to vaccination, for $10,000 each, resulted in a disagreement of the jury.

The Children's Island Sanitarium, located in Salem Harbor, reports that during last season they cared for 229 sick children; 32 of whom had hip disease and 23 Pott's disease. Children from 2 to 10 years old are admitted and kept for several weeks. The season opens about June 1.

Bequests.—The Free Hospital for Women in Brookline receives $20,000 as a permanent fund for the general purposes of the hospital by the will of the late Robert C. Billings.——Dr. Edward de la Granja, who died May 11, left his entire property to the Massachusetts Maternity Foundling Hospital, including his private hospital in Shawmut avenue.

Boston.

Heat Causes Sickness.—The heat of the past week, while at no time reaching 90 F., produced several cases of sunstroke, most of whom were treated in the new City Hospital Relief Station.

One Smallpox Case.—The first case of smallpox to be reported in Boston for several weeks, has developed in a soldier stationed at Fort Strong, one of the harbor defenses, who had been in the city on leave of absence.

Quarterly Death Report.—Two thousand, nine hundred and eighty-two deaths were reported in Boston during the first quarter of the year, a rate of 20.07. Infectious diseases, except scarlet fever, were much less prevalent than last year.

The open-air gymnasium for women and girls at the Charlesbank, Boston, was reopened, May 15. Here, under a competent instructor, they have the same advantages offered in many places to men and boys. An enrolment of 200 working girls shows how the offer is appreciated.

Boston Death Report.—In spite of the heat, the reported deaths decreased to 196 for the week ending May 23, a rate of 17.43 per 1,000. Pneumonia was responsible for 26 of these; whooping cough, 5; heart disease, 15; bronchitis, 4; diphtheria, 6; scarlet fever, 4; typhoid fever, 3, and tuberculosis, 27. The number of children who died under one year was 30, and under five years 52, while of those over 60 there were 35.

The American Social Science Association devoted one day of its annual meeting to health topics. Dr. Samuel H. Durgin, chairman of the Boston Board of Health, presided. Dr. S. W. Abbot, secretary of the State Board of Health, spoke on "Possibilties of the Medical Examiner System"; Dr. Robert Amory on "Deaths Caused by Poison"; Dr. Edward M. Hartwell on "The Relation of Death Rates to Growth Rates"; Dr. Charles V. Chapin on "Preventive Medicine and Natural Selection."

MINNESOTA.

Osteopath Board Named.—Governor Van Sant has signed the bill regulating the practice of osteopathy and has named a state board of examiners.

Personal.—Dr. Burton J. Merrill, Stillwater, has been appointed a member of the State Board of Health, vice Dr. M. H. Reynolds, St. Anthony Park.——Dr. Ray Humiston, St. Paul, has been appointed police surgeon, vice Dr. Paul Cook, resigned.

Smallpox.—During March and April four deaths occurred from smallpox in St. Paul, and the health commissioner fears a further spread of the disease before summer.——Secretary Henry M. Bracken, of the State Board of Health, has issued a report of the smallpox conditions in the state for the week ended April 25, which shows a total of 107 cases as compared with 162 for the preceding week and 193 for the week previous. Hemorrhagic smallpox has appeared in Hibbing on the Masaba Range. One death has occurred, and it is reported that there are more than 20 cases in the town.

Medical Course Not Shortened.—Dr. Thomas G. Lee, Minneapolis, has sent the following communication to THE JOURNAL:

> Permit me to correct a statement made in THE JOURNAL, May 2, 1903. On page 1226 it is stated that the medical course at the University of Minnesota has been shortened. This is not the case. The length of school year has just been lengthened from eight and one-half months to nine months. The medical student must take four full years in the medical department. There has been recently established a six-year combination course leading to the degrees of B.A. and M.D. In this course a student takes the first two years in the academic department, then enters the medical department, and at the end of two years receives B.A. and two years later M.D. The present entrance requirement in the department of medicine is one year's academic work, and two years' academic work will be required for entrance in 1905.

MISSOURI.

Mudd's Will Filed.—The will of the late Dr. Henry T. Mudd, St. Louis, was recently filed for probate. The estate is valued at several hundred thousand dollars.

Dr. Bauduy Injured.—Dr. Jerome K. Bauduy, St. Louis, was seriously injured, May 13, by being run over by a wagon, whereby he sustained a concussion of the brain and other injuries.

Personal.—Dr. Herman L. Nietert retired from the superintendency of the City Hospital, St. Louis, which he had held for more than four years, and was succeeded by Dr. John Young Brown.

Many New Physicians.—On May 14 the medical department of Washington University, St. Louis, graduated a class of 53. The degrees were conferred by Chancellor W. S. Chaplin of the university and the venerable Dr. Elisha H. Gregory delivered the address to the graduates.

New Officers for Medical Colleges.—At the annual meeting of Central Medical College, St. Joseph, the following officers were elected: Dr. Thompson E. Potter, president; Dr. Chester A. Tygart, secretary; Dr. William T. Elam, treasurer, and Drs. O. Beverly Campbell, Hubbard Linley, M. F. Weymann and George C. Potter, directors.

NEW YORK.

Buffalo.

The Ewald Reception.—A reception was given to the members of the Buffalo Academy of Medicine by Dr. Charles G. Stockton at the Saturn Club, May 20, in honor of Professor Ewald of Berlin.

Deaths for the Month.—The April report for the department of health shows an annual death rate of 15.72 per 1,000. The principal causes of death were as follows: Pulmonary consumption, 51; typhoid fever, 13; pertussis, 6; diphtheria, 7; debility, 41; alcoholism, 5; cancer, 18; apoplexy, 14; meningitis, 16; arteriosclerosis, 7; valvular disease of the heart, 32; bronchitis, 16; pneumonia, 27; appendicitis, 4; nephritis, 18; violence, 41. Total deaths for April, 1903, were 498, as compared to 436 for 1902. From a bacteriologic point of view the Niagara River water was in fair condition.

New York City.

Foreign Surgeons in New York.—Prof. Hans Kehr, Halberstadt, Germany, was given a dinner in his honor by Dr. Willy Meyer. By the invitation of the same gentleman, Professor Kehr gave a clinic at the German Hospital. He was also invited by Dr. B. Farquhar Curtis to hold a clinic at Bellevue Hospital.——Professor Ewald of Berlin, Germany, read a paper before the German Medical Society, May 26. He is also expected to take part in the scientific program of the meeting of the Medical Society of the County of New York on June 3.

OHIO.

To Fill Chair of Physiology.—Dr. J. J. R. MacLeod, London, England, a graduate of Aberdeen in 1898, and at present demonstrator of physiology in London Hospital Medical College, has been appointed professor of physiology in the medical department of Western Reserve University, Cleveland.

Faculty Changes.—Several changes have been made in the faculties of Ohio Medical University, Columbus, Drs. Thomas G. Youmans and Darlington J. Snyder having resigned. Dr. Youmans will be succeeded by Dr. McKendree Smith. Drs. Ernest Scott, E. A. Hamilton, Scott Fulton and H. H. Snively were added to the medical faculty.

New Faculty Members.—Starling Medical College, Columbus, has made the following faculty appointments: Dr. Harvey W. Whitaker, professor of diseases of the nose and throat; Dr. Starling S. Wilcox, professor of genito-urinary diseases; Dr. William K. Rogers, professor of otology; Dr. John Dudley Dunham, professor of bacteriology; Dr. William D. Deuschle, professor of mental and nervous diseases; Dr. Charles B. Morrey, professor of physiology; Dr. Dickson L. Moore, professor of diseases of children; Dr. Earl M. Gilliam, associate professor of gynecology; Dr. Isaac B. Harris, lecturer on physical diagnosis.

Cincinnati.

Personal.—Drs. C. R. Holmes, A. B. Isham and Louis Schwab have been appointed medical directors of the Cincinnati Hospital.——Dr. Louis E. Cook has been appointed pathologist to the branch city hospital for tuberculosis.

The commencement exercises of the Medical College of Ohio were held May 2. Addresses were delivered by Drs. P. S. Connor and T. A. Reamy and by Prof. Howard Ayres, president of the university. The graduating class consisted of 53, a number of whom secured positions as internes to the various hospitals: Cincinnati Hospital, Dr. Harry E. Shilling, Troy, Ohio; Dr. Charles Goosman, Cincinnati; Dr. Alfred Vos, Cincinnati; Dr. Sidney, Cincinnati. To Christ's Hospital: Drs. Charles A. Langdale, Cincinnati; Dr. Gordon F. McKim, Burlington, Ky. To the Jewish Hospital: Dr. Charles E. Hauser, Cincinnati, and Dr. Frank P. Zerfass, Oxford, Ohio. To St. Mary's Hospital: Dr. Claude Youtsey, Newport, Ky., and Dr. Karl G. Zwick, Covington, Ky. To the Good Samaritan Hospital: Drs. Grear H. Baker and Merrick L. Bates, Cincinnati, and Dr. Robert Cofield, Bethel, Ind. To Speers Memorial Hospital, Dayton, Ky.: Dr. Walter C. Cook, Cincinnati. The commencement exercises of the Miami Medical College were held May 1, the college graduating a class of 40, one of the largest classes of recent years. Addresses were made by the dean, Dr. J. C. Oliver, and by the Rev. Dr. Davil Philipson. Interneships were secured by the following: Drs. Earl H. Bruns, Merle Flenner, H. H. Johnson, F. W. Krueger, Cincinnati Hospital; Dr. Park Gilmore, St. Mary's Hospital; Dr. J. H. Grossman, Marine Hospital; Drs. W. C. Williams and C. J. Harris, German Deaconess Hospital; Dr. A. J. Markley, Jewish Hospital. The meeting of the alumni of the Miami College was held on the evening of May 1 and some two hundred sat down to the banquet. Dr. Millikin of Hamilton acted as toastmaster, and addresses were made by Drs. Chapman of Toledo, Fackler and others. Dr. Joseph Ransohoff has been appointed under the new code trustee to the Cincinnati Hospital.

PENNSYLVANIA.

Chester Hospital has an anonymous donation of $2,000 for a sun parlor.

Pseudo Butter in Almshouse.—An agent for the Dairy and Food Department has discovered that the managers of the Williamsport Almshouse have been feeding oleomargine to the inmates. The maximum penalty is $1,000 fine and imprisonment. The managers are to be prosecuted.

Foreigners and Insane.—In his recent report to the board of managers of the Friends' Asylum for the Insane, at Frankford, the superintendent, Dr. Robert H. Chase, regards insanity to be on the increase. He considers that in the United States immigration is a potent factor in this increase; while only one-eighth of the population is foreign born, one-third of the insane belong to this class. The high pressure and rapid pace of living in densely populated centers is another potent factor ascribed to the results. A high value is set on the occupation of the insane in their treatment.

Report of Smallpox in the State.—At a meeting of the State Board of Health, May 23, the chief subject for consideration was smallpox, and its prevalence in certain localities. In the lumber camps about Cross Fork, Potter County, 75 cases of the disease are said to exist. The locality has been placed under strict quarantine, railway and postal communication being cut off. Dr. Benjamin Lee, secretary, reported that during March and April there were 1,416 cases of smallpox, with 61 deaths in Pennsylvania. Included in this number are: Philadelphia, 219 cases, 20 deaths; Pittsburg, 153 cases, 15 deaths; West Farfield township, Crawford County, 137 cases; St. Mary's, Elk County, 100 cases.

Philadelphia.

The new maternity and nurses' home of the West Philadelphia Hospital for Women, including four adjoining houses, was opened with a reception on April 28. By improvements which cost about $15,000 the hospital can accommodate 60 patients.

Physicians Dine.—On the evening of May 21 the celebrated Clover Club, of which Colonel A. K. McClure is president, gave a "doctor's dinner," at which the guests were chiefly prominent physicians, some fifty in number. Lieutenant-General Nelson A. Miles was one of the guests of honor.

Pennsylvania Hospital Annual Report.—At the recent annual meeting of the board of managers of the Pennsylvania Hospital it was reported that the expenditures during the past year were $135,185, which is $37,000 in excess of its income. During the year 40,701 patients received treatment.

Heat Strokes.—A period of excessive heat in Philadelphia and vicinity for the week ended May 23 resulted in a considerable number of cases of heat stroke. The temperature has rarely been so high in May; the maximum was reached on the 20th, the thermometer recording 92 degrees, making Philadelphia, for the day, the hottest city in the country.

Women Graduate.—May 20 the Woman's Medical College of Pennsylvania graduated 30. Dr. Ella B. Everett, professor of gynecology in the college, delivered an address on "The Future of Women in Medicine." General George M. Sternberg, surgeon-general of the U. S. Army, retired, gave an address on the "Newer Knowledge and Prophylaxis of Infectious Diseases."

To Inspect Foreign Hospitals.—Dr. Geo. W. Holden, Denver, Col., recently inspected the Henry Phipps Institute for the treatment of tuberculosis. Dr. Holden represents Lawrence Phipps, who recently gave $500,000 for the building and equipment of a hospital in Denver for the treatment of consumptives. Dr. Holden has gone abroad to study European hospitals for the treatment of tuberculosis.

Commencement.—May 23, at the commencement exercises of the Medico-Chirurgical College, 93 students were graduated in medicine. The orator of the occasion was Prof. Arthur E. Kennelly, Sc.D., of the department of electrical science of Harvard College. The previous evening the annual meeting of the alumni association was held, at which ex-Attorney-General John P. Elkin made an address. The annual banquet followed.

Hospital Appointments.—Dr. Mary W. Griscom has been appointed chief of the obstetrical staff of the Woman's Hospital. Associated with her are Dr. Elizabeth L. Peck, senior member of the staff of the West Philadelphia Hospital for Women, also a member of the staff of the Philadelphia Hospital, and Dr. Sarah H. Lockrey, elected to the vacancy caused by the retirement of Dr. Anna E. Broomall. The latter recently succeeded Dr. Ida Richardson as visiting physician to the West Philadelphia Hospital for Women.

Foreign Surgeons Hold Clinics.—Prof. Hans Kehr of Halberstadt, Germany, on his way to and fro to the Congress of American Physicians and Surgeons, held a number of clinics in Philadelphia, chiefly on the line of gall-bladder surgery. While in the city he was the guest of Dr. Max J. Stern of the Polyclinic, but was entertained by several of the prominent men of the profession. Prof. J. von Mikulicz-Radecki of Breslau held a clinic at Jefferson Hospital on May 16. A large number of the profession were present.

Cerebrospinal meningitis made its appearance at the League Island Navy Yard on April 1, since which time four of the apprentice sailors have died of the disease. There are said to be six sailors in the Hospital of the Naval Home suffering with the disease. The outbreak is believed to be due to the crowded condition on some of the receiving ships. The medical officials, including the chief medical inspector of Philadelphia, state that the disease is not "spotted fever," and that there is no cause for fear of the spread of the affection. Tents are being used to relieve the congestion of the vessels, and it is believed that the disease will soon be stamped out.

Health Education Campaign.—Dr. Edward Martin, the new director of the department of health, has announced his intention of conducting the department on educational lines. It is his purpose to ask the County Medical Society and the College of Physicians to aid in bettering the health conditions of the city, by taking up for discussion practical subjects such as preventive measures of disease. The source of typhoid fever infection, chiefly through the water supply, is emphasized. The Pediatric Society is asked to formulate regulations setting a standard for the milk supply, and to offer suggestions about infant feeding. Impure, unfiltered drinking water has been used in most of the public schools and the board of education has been asked for a report on the matter to the end that pure water may be supplied. The Pennsylvania Society for the Prevention of Tuberculosis has been asked to co-operate with the department in the warfare against tuberculosis. A plan is on foot to have the subjects of the latter disease who are inmates of the Philadelphia Hospital, to sleep in the open air, temporary provision for the same being made on the roof of the hospital.

Many Bequests.—By the will of the late Hiram Brooke, a retired dry-goods merchant of Philadelphia, $77,000 was bequeathed to charities. Among many bequests are the following: Philadelphia Dispensary, $500; Pennsylvania Hospital, $2,000; St. Joseph's Hospital, $1,000; Friends' Society for the Relief of the Sick, $2,000; Philadelphia Nurses' Home, $500; Insane Department of Pennsylvania Hospital, $1,000; St. Timothy's Hospital, $500; Home for Consumptives, Chestnut Hill, $500; Jewish Hospital, $1,000; German, Jefferson, Hahnemann and Episcopal hospitals, each $2,000; Bethany Dispensary, $2,000. Louis Rosenberg has given to the Jewish Hospital $5,000, to endow a bed in honor of his wife, and a like amount has been given by the sister and brothers of Herman Jonas, to found a bed in his memory. Nineteen hundred and sixteen subscribers to the Federation of Philadelphia Jewish Charities contributed $123,039.50 to the organization the past year. In the allotments made the Jewish Hospital Association received $30,000; the Jewish Maternity Association $9,000; the National Hospital for Consumptives, Denver, Col., $3,000. Among the bequests from the estate of Mary A. Allison were those of $2,500 to the Presbyterian Hospital, and $5,000 to the Methodist Hospital.

TENNESSEE.

Personal.—Dr. William Krauss announces that he is no longer connected with Memphis Hospital Medical College.

College Opens.—The medical department of the University of the South, Sewanee, opened for its eleventh year, May 7, with an initial registration of sixty.

Accident to Physician.—Dr. William Morrow, Nashville, was run over by a train recently, and his left hand was so badly crushed that amputation was necessary.

A Large Graduating Class.—A class of 195 was graduated, April 27, from Memphis Hospital Medical College. Dr. William B. Rogers, dean, delivered the faculty address; Colonel Carroll, president of the board, made the address to the graduating class, and conferred the degrees, and Dr. Rogers delivered the diplomas to the class.

GENERAL.

The Meningitis Outbreak.—Two additional cases of meningitis developed last week among the sailors at League Island Navy Yard. Most of the recruits are now encamped in tents, and no serious extension of the disease is feared.

Association of Medical Librarians.—The sixth annual meeting of this association was held in Brooklyn, N. Y., May 16, 1903. A number of librarians and physicians representing medical libraries throughout the country were present. Papers and discussions were contributed by Mr. C. P. Fisher of Philadelphia, Dr. T. G. Lee of Minneapolis, Mrs. G. W. Myers and Dr. E. H. Brigham of Boston, Mr. J. S. Brownne and Dr. W. S. Dennet of New York, Mr. A. T. Huntington of Brooklyn, and others. The officers elected for the ensuing year are: President, Dr. William Osler, Baltimore; vice-president, Dr. Abraham Jacobi, New York; secretary, Mr. Albert T. Huntington, Brooklyn, and treasurer, Dr. George D. Hersey, Providence.

FOREIGN.

Serum Diagnosis of Meat Poisoning or Botulismus.—The German war department has issued orders that in case of suspected poisoning from meat the serum test shall be applied, as it has been found that the serum of persons convalescing from botulismus has marked agglutinating properties for the enteritis bacteria. The results of this test may enable a retrospective diagnosis to be made, even several days after recovery.

Pribram's Jubilee.—The thirtieth professional anniversary of Professor A. Pribram was celebrated May 14 at Prague, with much ceremony. The *Prager Med. Wochft.* of that date contains the complete list of the scientific works of this eminent savant and those of his pupils, filling several pages. Three numbers of the *Deutsches Archiv f. klin. Med.*, vol. 74, formed a jubilee number in his honor, the articles all emanating from his clinic.

Jubilee for Professor Runeberg.—The *Zeitschrift f. klin. Medicin* has issued a Festschrift in honor of Professor J. W. Runeberg, who has completed his twenty-fifth year in the chair of clinical medicine at Helsingfors. Twenty original articles were contributed by his present or former pupils. We notice that one of the prominent pictures at this year's Salon at Paris is a portrait by a Finnish artist of Runeberg in his apron at the bedside of a hospital patient.

Medical Study Trip in Germany.—The third annual study trip of physicians to the watering places of Germany from Kreuznach, Ems, Nauheim, Wildungen and Oeynhausen, etc., to Pyrmont, commences at Mayence, September 8, and terminates at Cassel the day before the opening of the Naturforscher Congress there September 20. The first stage of the journey will be by steamer on the Rhine. These study trips are becoming more and more popular every year, and the party receives almost an ovation at each health resort visited.

Campaign Against Yellow Fever in Brazil.—According to an official announcement by the Brazil Board of Health, disinfection will no longer be enforced in cases of yellow fever. As it has been established that the mosquito is the only means of transmission of the disease, prophylaxis will be restricted to isolating the patient, in his own house, if desired, screening doors and windows and using pyrethrum, formol and other insecticides in the house and in those adjacent. Physicians are urged to report all cases on suspicion, without waiting for a positive diagnosis, and the lay press, as the guide of national opinion, is entreated to uphold the authorities in this campaign on new lines.

Campaign Against Quacks in France.—De Lavarenne has been publishing in the *Presse Médicale* a series of articles urging concerted and vigorous action against the ads of charlatans, and emphasizing the harm done by them both to the public and medical profession. The matter has been taken up by Dr. Maxwell, who is attorney general for the Bordeaux Court of Appeals, while he is at the same time a physician. He is collecting material for a medicolegal study of the subject, and appeals to the profession at large for data. He wishes to have samples of particularly flagrant ads forwarded to him, and also all information of injury done by the quack practices or by the delay imposed and of excessive charges.

The Outlook for the Consumptive.—Lutaud protests editorially in his *Journal de Méd. de Paris* against the exclusion of tuberculous subjects from various occupations, which is being advocated in France. He thinks that the campaign against tuberculosis is becoming more and more "war on the tuberculous." If the state closes all avenues of employment for them, official clerkships, positions as teachers, etc., then, he argues, the state must either kill them off or else support them. If the latter, the state will in time be besieged by troops of impostors simulating tuberculosis to be supported without work. Lutaud has never accepted the prevailing bacteriology and exclaims in conclusion: "Oh Theory, Theory, how many stupid things are done in thy name!"

The Contract Practice Troubles in Germany.—The Reichstag has modified the sickness insurance legislation, as anticipated, to increase the maximum period of support from thirteen to twenty-six weeks, and in maternity cases from four to six weeks, and also to include the venereal diseases in its provisions. The new law does not mention the question of remuneration of the physicians, but five of the deputies, representing all the political parties except the socialists, delivered able speeches on the exploitation of the medical profession by the sick benefit societies, and other matters affecting the relations between the profession and the "Kassen," calling on the government to interfere to prevent the degradation of the medical profession. One exchange remarks that the subject could not have been presented better or more convincingly by any medical man, and this unprecedented pleading on behalf of the profession is accepted as a very gratifying sign. The Reichstag in consequence adopted a resolution before it dissolved commending the matter to the action of the next parliament, suggesting the appointment of a standing committee of representatives of the medical and lay officers of the "Kassen."

International Congresses in Europe.—The third International Congress of Thalassotherapy (marine) met at Biarritz, April 19 to 21, with a numerous attendance. Addresses were made by Liebreich, Berlin; Winternitz, Vienna, and Robin, Paris. The International Antialcohol Congress convened at Bremen just before, and the second International Congress of the Medical Press followed at Madrid, preceding the great International Medical Congress. The third International Congress of Public Assistance and Private Benevolence will meet at Bordeaux, June 1 to 7, and the seventh of otology at Bordeaux August 1 to 4. Beside these the German Otologic Congress assembled at Wiesbaden May 29; the German Congress of Surgery will be held at Berlin, June 2, and of orthopedic surgery at the same time, while the gynecologic will be held at Würzburg; August 1 is the date for the third French Congress of Neurology. The eleventh International Congress of Hygiene and Demography is announced for September 2 to 8 at Brussels. September 16 to 19 the German Public Health Congress will meet at Dresden, and September 20 to 26, the seventy-fifth Naturforscher Congress at Cassel.

Second International Congress of the Medical Press.—The constitution outlined at the Monaco conference was definitely accepted at this congress, which immediately preceded the International Medical Congress at Madrid. Dr. Cortezo of Madrid was elected president of the international association, and his journal, "El Siglo Medico," will, therefore, be the official organ of the international medical press until the next congress. He is an accomplished linguist and addressed the assembly in four languages, turning to the French, German, Italian and Spanish members as he spoke in their tongue. It was stated that there are at present 1,183 medical periodicals in the world, this country leading with 258, followed by France with 237, Germany with 163, Italy with 109, England with 77, Austria with 73, and Spain with 70. Russia has 47, Belgium 28, Holland 23, Argentina 11, and so on to Venezuela with one. Among the addresses made at the congress was one by Blondel, Paris, on the necessity for establishing an international central bureau for medical journals similar to that of the Associated Press for daily papers. Others spoke on the influence of the medical press on the decrease in the mortality from diphtheria. Rodriguez-Mendez discussed the subject of the education of the medical journalist. Noguera expatiated on the influence of the medical press on the progress of military science, and Pulido on the relations of the medical press to the public authorities. Interesting historical sketches of the medical press in various countries were read by delegates. The members of the congress assembled in a banquet after the congress adjourned.

International Anti-tuberculosis Conference at Paris.—The second and final sitting of the inner council of the international bureau for the prevention of tuberculosis, was held at Paris, May 3. The first conference met at Berlin and we all remember the heartiness with which the German government threw open its national halls for the conference and promoted it in every way. At Paris, on the other hand, the public authorities were too engrossed with the reception of the king of England and other matters to officially co-operate, so the entire arrangements devolved on private initiative. Letulle is secretary-general to the International Antituberculosis Congress to be held at Paris in October, 1904, and welcomed the members of the inner council at a reception at his house, where some unpublished poems of Professor Richet were recited or sung by professionals. The council accomplished its task, which was the gathering and comparing of information in regard to the campaign against tuberculosis in various countries, as a preliminary for the work of the approaching congress. The assembly concluded with a grand meeting thrown open to the public, the hall crowded to the doors, eliciting great enthusiasm. Casimir-Perier in his address at this meeting urged the co-operation of hygiene to arrest the progress of tuberculosis, with state aid, which deprives it of victims. These two are indispensable and inseparable. Both should act with gentleness and not with brute force. Their success, he added, is bound up with the solution of the most complex social problems and the campaign against tuberculosis should not be left to the medical profession alone, but requires the mobilization of all the forces of society, public and private, official and voluntary. A subcommittee was appointed to confer with local and national authorities in regard to measures to control the spitting nuisance. A resolution was adopted urging that the laws governing the spread of infectious diseases, especially tuberculosis, should be taught in schools and colleges.

LONDON LETTER.

Increase of Lunacy in Scotland.

From the report just issued it appears that the number of insane in the asylums of Scotland is 16,658. The statistics from the year 1858 onward show an increase. In that year the number was 5,824. The proportion of insane to the population has been steadily rising in the last ten years. In 1893 it was 204 per 100,000; now it is 250.

The Sleeping Sickness in Uganda.

Dr. C. Christy of the Liverpool School of Tropical Medicine and one of the commission dispatched to Uganda by the Foreign Office and Royal Society to investigate sleeping sickness, which is ravaging that country, has just returned to England. He made a very interesting journey among many little known tribes, returning via Fashoda and Khartoum. His special object was to prove or disprove the theory that sleeping sickness depends on filaria in the blood stream. After three months traveling he found a large district in which sleeping sickness raged and there was no sign of filariæ. It is now proved that sleeping sickness is in no way connected with filariæ. Simultaneously Dr. Castellani, bacteriologist of the commission, was working in his laboratory at Entebbe. He has proved that sleeping sickness is due to a previously unknown bacillus. Meanwhile the disease is making great ravages through South Kavirondo and along the shores of Victoria Nyanza. In villages through which Dr. Christy passed half or two-thirds of the people were suffering from sleeping sickness. A satisfactory feature with regard to Uganda is that the disease shows no tendency to spread far from the shores of Victoria Nyanza. It is not infectious in the ordinary sense of the word, and seems seldom to be conveyed from one person to another.

The King's Sanatorium.

As announced in The Journal, Sir Ernest Cassel, a wealthy merchant, placed at the disposal of the king about a year ago the sum of $1,000,000 for some purpose of public utility. The king decided to build a sanatorium for consumption. Prizes were offered for the best essays and plans for such an institution. Of 180 essays sent in Dr. A. Latham gained the first prize of $2,500. A sanatorium will be built according to his plans at what Sir William Broadbent describes as "a perfect natural site" in Sussex, near Midhurst. It is near a vast open space called Pound Common, which is public property, and, therefore, safe from the encroachments of the builder. For miles around are breezy stretches of gorse and heather. To the north of the site is a solid screen of the plateau itself, and on the east and west are acres of trees. The aspect of the sanatorium will not be absolutely south, for Dr. Latham has pointed out that it is not desirable in summer, when the sun would pour directly into the patient's rooms to make them uncomfortably hot. A slight inclination to the east or west will, therefore, be adopted. The extent of the property to be laid out is 151 acres. A fine garden will be laid out around the building. It is the ambition of the king that this should be the most perfect sanatorium for consumption in the world, embodying the experience of all the best models.

The Action on Bacteria of Electrical Discharges of High Potential and Rapid Frequency.

At a meeting of the Pathological Society Mr. Alexander G. R. Foulerton and Dr. A. M. Kellas read an interesting paper on this subject, in continuance of a communication on the same subject presented to the society last year, showing that by discharging the current close to the surface of a fluid containing bacteria, held in a test-tube, through the bottom of which a platinum wire had been sealed, suspended organisms could be destroyed. The current used was one of from 2.5 to 5 ampères, the voltage varied from 35 down to 24, and the experiments were carried out in common air.

The Plague.

In Cape Colony the following cases are reported for the week ending April 18: Quarantine station, Saldanha Bay, 2 Asiatics; Port Elizabeth 7, of whom 6 were natives and 1 European. Of the former 3 were found dead; at the plague hospital, Port Elizabeth, there are 17 cases under treatment. Plague-infected rats continue to be found in the town

Deaths from Violence in London.

Sixty-five deaths from violence occurred in the week ending April 25; 13 were suicide and 2 homicide, while the remaining 50 were attributed to accident or negligence.

Infectious Diseases in London.

In the London fever hospitals there are now 38 cases of smallpox, 1,698 of scarlet fever, 767 of diphtheria, 10 of typhus, and 60 of enteric fever. The admissions during the week as compared with the preceding three weeks are as follows: Smallpox, 9 cases against 3, 5 and 22; scarlet fever, 243, against 205, 158 and 188; diphtheria, 108, against 136, 99, and 96; enteric fever, 4, against 15, 8 and 5. During the four weeks ending April 25 the total death-rate for the metropolis was 16 per 1,000, being 3.3 below the mean rate in the corresponding periods of 10 years, 1893-1902. In the week ending April 25 there were 1,483 deaths, which included 80 from measles, 7 from scarlet fever, 22 from diphtheria, 33 from whooping cough, 17 from diarrhea, and not one from smallpox, typhus or enteric fever. The deaths from measles, which had been 73, 48 and 74 in the preceeding three weeks, rose to 22, but were 11 below the average. The deaths from whooping cough, which had been 60, 47 and 33 in the preceding three weeks, rose to 38, but were 22 below the average. Twelve deaths were attributed to influenza against 17, 17 and 8 in the preceding three weeks.

Correspondence.

Illinois Nurses' Bill Vetoed.

CHICAGO, May 26, 1903.

To the Editor:—An editorial bearing the above caption appeared in THE JOURNAL, May 16. As the information therein is incorrect, and as an injustice has, doubtless unwittingly, been done Governor Richard Yates of Illinois, an executive whom the Illinois State Medical Society took occasion to highly compliment in formal resolutions adopted less than a month ago, I beg leave to state the facts in the case.

The editorial states that the bill was vetoed "simply on the ground that the examining board was to be appointed from names selected by the Illinois State Medical Society." Again, "the governor objects to this as taking from the executive his prerogative, and, we might add, his political perquisites."

The above must be a mistake, as the Illinois State Medical Society is not mentioned in the bill (Senate Bill No. 147).

The bill provided for the appointment of an examining committee by the State Board of Health, from names submitted by the Illinois State Association of Graduate Nurses; the appointment of one board by another. The board of health, not the governor, was clothed with the appointing power. Furthermore, appointment from these nominations was mandatory as the word "may" in the law means "shall." This practically gave the appointing power to the Nurses' Association, and at the same time held the governor responsible for the work of the board over which he had no control.

The governor says in his veto:

> I veto this bill because I do not believe there was due deliberation in its consideration and passage, and because it is not consistent with the general policy of the constitution.
>
> The theory of the constitution is, that the governor of the state, by and with the advice and consent of the state senate, shall nominate and appoint the state officers, and that the state officers shall perform state duties. . . . The performance of said duties by persons who are not state officers is not contemplated by the constitution, and was not contemplated by the framers thereof. . . . When the people shall deem it wise to commit the performance of the official duties of the state to persons who are not state officers, they may revise the policy of the present constitution by amending the same. . . . Until then, state duties should be performed by state officers and not by persons selected or nominated by societies. . . . The tendency to create boards consisting of persons whose selection is absolutely dictated by mere volunteer associations of persons who gather themselves together and constitute a society, is a tendency that should be checked.

The above is in accord with the decision of the Illinois Supreme Court in 1899 in the case of Charles W. Lesher vs. the People of the State of Illinois.

In the matter of appointments by the executive, the governor thus takes the ground that the constitution guarantees to the governor the right not only to appoint, but also to nominate and appoint. This being the case, it is his opinion that any statute which undertakes to nullify and abridge the constitution must be considered not only a violation of the constitution, the fundamental law of the state, but also wholly wrong in policy and principle.

That Governor Yates does not object to "the assistance of a qualified organization in the selection of persons for a purely professional function" the Illinois State Medical Society is in a position to testify. At the beginning of his administration the governor submitted to the judicial council of the society the names of many persons seeking medical appointments under the state government, and asked for recommendations. The judicial council by resolution has since expressed its appreciation of this act of Governor Yates. In the presidential address in 1901, the president of the state society stated that Governor Yates had kept his ante-election promises, and had given the society all possible consideration. As late as two months ago the legislative committee of the Illinois State Medical Society, in a circular letter sent to over 5,000 physicians, stated that Governor Yates had given the medical profession of Illinois more consideration than any governor of recent years and that he was in hearty sympathy with the high ideals entertained by the profession.

In conclusion permit me to quote from the remarks of Governor Yates in his veto of the Dental Examiners' Bill on May 15, 1903:

> The present executive is willing, and doubtless any other executive will be willing to listen to proper and reasonable recommendations, and it may be in the appointment of professional boards every executive will, in nine cases out of ten, select as members the persons recommended by the profession affected, inasmuch as the executive will doubtless assume that the profession affected is more interested and better informed than any other persons or citizens can possibly be.

GEO. W. WEBSTER,
President State Board of Health.

Maternal Impressions.

TELL CITY, IND.

To the Editor:—In THE JOURNAL of April 4, Dr. E. T. Shelly relegates the maternal-impression theory to the medical lumber-room, a very comfortable, if not a very satisfactory, way of disposing of all abstruse theories which are not clearly understood. The difficulty, however, we meet at the very threshold of such a happy disposal of the subject, makes it a herculean task, for are there not on every hand too many and too conspicuous cases to satisfactorily dispose of them with a wave of our wand? When Dr. Shelly declares there is no anatomic or physiologic connection between the mother and child he assumes a conclusion not thoroughly established, and which may be a figment of the fancy. If, however, there is no such connection, it does not follow that there is an absence of psychologic connection. Surely we witness the too often painful effect of environment during the gestatory period. The mother may not be wholly blamable if her offspring, gestated in an atmosphere reeking with all that is base and degrading, is born a pitiable object. True, the child born in a den of vice and infamy may, by inherent qualities or central impetus, burst the restraints of infamy and burn a star of light over a sea of corruption. Too often, alas, the reverse is true.

There is a subtle and possibly a reciprocal connection between the mother and the fetus during the entire embryonic life. Nor is she blamable if, during gestation, she be so rudely shaken from the poise of harmony by some sudden shock that the brunt is borne by the offspring ever after. I have witnessed too many well authenticated cases to doubt it for a moment. The mother should have the most harmonious, beautiful and elevating surroundings during gestation. The restraints of toil and care should irk her not. She should not be stewed with worry or spitted with starvation. She should be placed on a well-guarded pedestal, canopied with comfort and gently basted with sweet-scented bouquets. Her make-up is intricate. She is a problem, to be solved by no simple rule of mathematics. On her environment hangs the future welfare of posterity. Her mental impressions may wonderfully impress the embryo, may mark it, ay, may destroy its harmony, its usefulness, its life.

F. ANSON EVANS.

Preserved in Wax.

MUSKEGON, MICH., May 22, 1903.

To the Editor:—The following case illustrates the remarkable preservative properties of cerumen: J. W. S., age 63; white; Civil War veteran. A beetle of the species *Tenebrio molitor* entered right ear one evening in August, 1861, while patient was in Camp Good Hope, near Navy Yards, Washington, D. C. Patient immediately applied to regimental surgeon, who, failing in efforts to remove insect, applied olive oil to ear and instructed patient to return to tent and lie on right side, and suggested that the bug would probably be found on blanket in the morning. Pain in ear kept patient awake until nearly morning and when awakened ear felt much better, and patient forgot to look on blanket for insect, which he supposed had escaped from the ear. Since insect entered ear, patient has been able to hear but faintly with right ear.

Patient applied to me for relief from deafness May 8, 1903. On examination, I found external canal filled with cerumen. Applied solvent and instructed patient to return in twenty-four hours. After syringing the ear the following day, I found the beetle, which was ⅝ inch in length and slightly greater in width than the normal caliber of the canal and with ear tenaculum, removed it, not without some difficulty. The head of insect lay within one line of tympanum.

After 41 years and 8 months the beetle was in perfect state of preservation; legs, feelers and all appendages intact. One week after removal the external canal appeared normal and the hearing is nearly normal. F. B. Marshall, M.D.

Plaster-of-Paris Bandages.

Toledo, Ohio, May 8, 1903.

To the Editor:—It is not generally known that the late Dr. Hezekiah P. Mead of Morrisville, Madison County, N. Y., who died last year, was the first to discover the practicability of applying the plaster-of-paris bandage to the treatment of fractures and other displacements in which it is so universally used by the profession throughout the land. This was early in the year 1860.

With an utter lack of any thirst for notoriety, and content with his mere contribution to the profession and to the good of humanity, he gracefully allowed the name of another skilled and more prominent surgeon of the time to be credited with this valuable discovery.

Through intimate association and personal knowledge of the facts at the period named, I have felt it incumbent on me to call attention to the above fact, in justice to a man of consummate skill and the highest citizenship. In a personal reminiscence which I caused to be published in the *Toledo Blade* in 1901, I gave in some detail the circumstances which first led to the adoption of this new use of a common and well-known article, and which I believe I am able to substantiate if desired.

N. B. Bacon.

Failure of the Eddyites in Arkansas.

Winfield, Ark., May 12, 1903.

To the Editor:—I see in The Journal, May 9, that the Eddyites failed to receive a charter in Philadelphia. At the past session of the Arkansas legislature these people got a bill through the senate to exempt them from Section 13 of the recent medical act of the state, but in the house we managed to put an amendment on the bill "providing that they receive no pay for their practice." The senate never concurred in the amendment, so they are out here. Cheves Bevill.

Triplets.

Hope, Ark., May 19, 1903.

To the Editor:—May 14 I delivered Mrs. M. of triplets, two girls, one boy. The weights of the two girls were 5½ and 6 pounds and of the boy 6½ pounds. They are all hale and hearty and at this time are doing nicely. Mrs. M., who is the mother of four other children, is also doing nicely. She had the easiest time of any of her confinements.

J. H. Weaver.

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

DO NEGROES RECOVER FROM PHTHISIS?

Albuquerque, N. M., May 13, 1903.

To the Editor:—I desire to learn through the columns of The Journal, from one or more physicians residing in southern states and who have had any considerable number of cases of pulmonary tuberculosis among the African race, if they know a recovery among negroes suffering from this disease. I desire the information for statistical use and will consider it a great kindness from anyone who can give me such aid, either by personal communication or through The Journal. Francis Crosson.

SALOL COATED IPECAC PILLS.

Newman Grove, Neb., May 15, 1903.

To the Editor:—Will you please inform me where I can get ipecac pills that are coated with salol? D. B. McMahon, M.D.

Ans.—We are unable to learn of any such ready-made pills. Any of the large pharmaceutical houses, however, will prepare these for you, or perhaps a druggist in your own city will be able to do the same satisfactorily.

PINK REACTION IN URINE.

Philadelphia, May 18, 1903.

To the Editor:—With reference to the pink coloration of urine noted by Dr. Minter in The Journal, May 16, p. 1386, on addition of nitric acid: I have observed such a reaction in a case in which also tubercle bacilli were found in the urine, and the same observation has been made, I believe, by Dr. Joseph Walsh of this city.

Augustus A. Eshner.

PHOSPHORUS ELIMINATION IN TABES.

Matagorda, Texas, May 6, 1903.

To the Editor:—Has it been observed that there is an increased elimination of phosphorus through the urine in tabes dorsalis? And, if so, has the administration of phosphoric acid been recommended for treatment of this disease? S. A. F.

Book Notices.

The Prevention of Disease. Translated from the German with an Introduction by H. Timbrell Bulstrode, M.A., M.D., D.P.H. In Two Volumes. Cloth. Pp. 1063. Net Price, $3.75 per Volume. New York: Funk & Wagnalls Company. 1903.

This is a translation of a well-known German work, a composite production by numerous teachers. The names of the authors give, in themselves, a fairly good idea of the merits of the work, including as they do some of the most eminent specialists and internists of the German Empire. There are, of course, in a work like this some divergences of opinion and in one particular it seems peculiar that a book coming from the publishing house of Funk & Wagnalls should contain arguments advising the moderate use of alcohol and even occasionally the taking of a little more than usual on festive occasions, as suggested in Dr. Einhorn's article on the "Prevention of Diseases of the Digestive Organs." In another article, that of Fuchs on the "Prevention of Mental Disease," total abstinence seems to be advocated, at least on the part of the physician. The two volumes as a whole, however, are a valuable addition to the hygienic medical literature in our language.

Therapeutics of Infancy and Childhood. By A. Jacobi, M.D., LL.D. Third Edition. Cloth. Pp. 559. Price, $3.50. Philadelphia and London: J. B. Lippincott Co. 1903.

As the author says in his introduction, while many additions have been made to the book, there have been no actual changes in its general contour. It is the revision of a well-known work which has already received its share of favor with the profession. The author's views in regard to the at present much discussed question of infant feeding are stated by him in the beginning, that there will be no unanimity on the question as long as infants insist on being individuals, having their own special constitutional idiosyncrasies. The author acknowledges his indebtedness to the contributors to the Festschrift published in his honor between two and three years ago, than which he says he knows of no collection of an equal number of monographs on scientific and practical subjects of equal value connected with pediatrics.

Book on the Physician Himself and Things that Concern His Reputation and Success, by D. W. Cathell, M.D. The Twentieth Century Edition, Being the Eleventh Edition Revised and Enlarged by the Author and His Son, William T. Cathell, A.M., M.D. Cloth. Pp. 411. Price, $2.50 net. Philadelphia: F. A. Davis Company. 1902.

The appearance of the eleventh edition of a work ought to be sufficient evidence of its popularity. This book has been before the medical public for many years. There is no other exactly like it in its combination of worldly wisdom and ethical advice. Numerous quotations interpolated in the book remind one of the Latin quotations in old Burton's "Anatomy of Melancholia," but they are so funnily chopped up and sawed off in some cases that the impression is somewhat different. We do not consider them a valuable addition.

Physical Chemistry for Physicians and Biologists. By Dr. Ernest Cohen, *Professor of General and Inorganic Chemistry in the University of Urecht.* Authorized Translation from the German. By Martin H. Fischer, M.D., Instructor in Physiology in the University of California. Cloth. Pp. 343. New York: Henry Holt & Co. 1903.

Nowadays when the ions, electrolytes, etc., are beginning to play such an important part in the discussions of therapeutics and physiology, a work like this translation of Prof. Cohen's should be welcomed. As a preliminary note to the American translation Prof. Jacques Loeb says it not only serves as an introduction to physical chemistry, but also teaches the physician and biologist how to apply this science to medical and biologic problems. We admit that in some respects the book will itself require some introductory study by a large majority of practitioners, but this is not an avoidable defect. The translator has evidently done his work well and has made his matter as clear as possible considering the nature of the text.

Marriages.

Rachel Robbins, M.D., to William E. Stieren, M.D., both of Pittsburg, Pa., April 30.

John H. Jenness, M.D., Rising Sun, Md., to Miss M. Bessie Marshall, at Baltimore, May 6.

Mark Monroe Evans, M.D., Le Grand, Iowa, to Miss Mary Carolyn Dodd of Montour, Iowa, April 29.

E. A. Cantonwine, M.D., Van Cleve, Iowa, to Miss Daisy M. White of Rolfe, Iowa, at Marshalltown, Iowa, May 6.

Deaths.

Thomas G. Morton, M.D., who for years has been one of the most prominent surgeons of Philadelphia, died at Cape May of cholera morbus May 20. He was born Aug. 8, 1835, in Philadelphia, his father being Dr. S. G. Morton, a distinguished physician and scientist. Graduating from the Medical College of the University of Pennsylvania in 1856, Dr. Morton served as resident physician in the Pennsylvania Hospital, where he later succeeded Dr. Joseph Pancoast as attending surgeon. He was one of the founders of the Polyclinic and Orthopedic hospitals. During the Civil War he organized a military hospital, and became surgeon to other army hospitals. His many services to the state included chairmanship of the committee of the commission for the erection of the State Hospital for the Insane for the southern district of Pennsylvania. He has served as vice-president of the Society to Protect Children from Cruelty. He was at one time a commissioner of the State Public Charities and again chairman of the State Committee on Lunacy. The clinical lectures he held at the Pennsylvania Hospital have been attended by thousands of students. Dr. Morton was a member of various foreign and American professional societies, was a frequent contributor to current medical literature, and has written standard works on medical subjects, including "The Transfusion of Blood and Its Practical Application." Since 1890 he has been an active member of the Board of Public Education. Deceased is survived by his wife, three daughters and two sons, one of the latter being Dr. Thomas S. K. Morton.

Adelbert H. Tagert, M.D. University of Vermont, 1866, died at his home in Chicago, May 27, of pneumonia, after an illness of a few days, aged 57. Dr. Tagert, after practicing in Buffalo for two years, came to Chicago thirty years ago, where he has since resided. He was surgeon of the C. M. and St. P. Railway for seventeen years, and at the time of his death was president of the Kedzie Hospital. He was a member of the Chicago and Illinois State Medical societies and of the American Medical Association.

Florence W. Hunt, M.D. Northwestern University Woman's Medical School, 1894, formerly a member of the Illinois State Board of Health, neurologist to St. Joseph's Hospital, and a member of the Chicago and Illinois State Medical societies and the American Medical Association, died in Milwaukee May 27. This news is received as we go to press, and a further notice will be given next week.

H. Grey Latham, M.D. University of Virginia, Charlottesville, 1851, died from heart disease of long standing at his home in Lynchburg, Va., May 5, aged 72. He was commander of the famous Latham battery during the Civil War, and was for several terms president of the Virginia Medical Board.

William R. Hayden, M.D. Eclectic College of the City of New York, 1867, died at his home in Bedford Springs, Mass., April 29, aged 83. He was president of the New York Pharmaceutical Company for 45 years.

Charles Clayton Abernathy, M.D. University of Pennsylvania, Philadelphia, 1851, of Pulaski, Tenn., who achieved distinction as a surgeon in the Confederate service, was found dead in bed, April 27, aged 75.

Edward De La Granja, M.D. Central University, Madrid, Spain, 1855, a member of the Royal Society of Medicine; brigade surgeon in the Crimean War, and for many years a resident of Boston, died at his home in that city, May 10, aged 73.

George W. Hunton, M.D. Jefferson Medical College, Philadelphia, 1847, died at his home in Virginia, from asthma, aged 77. During the Civil War he was surgeon of the Eighth Virginia Infantry, C.S.A.

Alfred E. Moore, M.D. Medical Department Iowa State University, Iowa City, 1887, died at his home in Wayland, Iowa, from pneumonia, April 21, after an illness of two weeks, aged 40.

Augustus S. Long, M.D. Long Island College Hospital, Brooklyn, 1865, died at his home in St. Joseph, Mo., from inflammatory rheumatism, April 30, after an illness of two weeks, aged 62.

John C. Brown, M.D. Atlanta Medical College, 1875, of Whitesburg, Ga., died at the home of his daughter in Carrollton, Ga., April 27, from paralysis, after an illness of three weeks.

Walter Bacon Morrison, M.D. Long Island College Hospital, Brooklyn, assistant surgeon in the Civil War, died at his home in Muskegon, Mich., May 2, after a lingering illness, aged 65.

James Aloysius Roache, M.D. Long Island College Hospital, Brooklyn, 1891, died at his home in Brooklyn, from cirrhosis of the liver, May 3, after an illness of four weeks, aged 44.

Alfred B. McChesney, M.D. University of Michigan, Ann Arbor, 1853, a surgeon in the Army during the Civil War, died at his home in Chicago, from pneumonia, May 7, aged 75.

Fieldon R. Waggoner, M.D. Missouri Medical College, St. Louis, 1878, died at his residence in Sacramento, Cal., April 28, from paralysis, after an illness of four days, aged 67.

Samuel P. Buck, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1853, died at his home in West Woolwich, Maine, April 22, after a brief illness, aged 77.

Harold Hamilton Haas, M.D., passed assistant surgeon, U. S. Navy, died from the effects of a self-inflicted gunshot wound of the head, at Staunton, Va., aged 30.

Jesse J. Morgan, M.D. College of Physicians and Surgeons, Baltimore, 1883, died at his home in Dacusville, S. C., April 27, after an illness of one year, aged 42.

James W. Taylor, M.D. Jefferson Medical College, Philadelphia, 1854, died suddenly at his home in Leesburg, Va., from heart disease, April 28, aged 70.

James M. Clopton, M.D. New York University, 1867, died suddenly from heart disease at his home in Mercury, near Huntsville, Ala., April 24.

John H. Salyer, M.D. Tulane University, New Orleans, 1899, of Ledbetter, Texas, died at Navasota, Texas, after a long illness, April 28, aged 29.

Bernardus Schutte, M.D. University of Leyden, Holland, 1875, died at his home in Grand Rapids, Mich., April 30, from aortic aneurism, aged 56.

Griffin Reno, M.D. Albany Medical College, 1862, of Bradford, Pa., died at Venus, Venango County, Pa., April 30, from heart disease, aged 60.

Sylvanus L. Roberds, M.D. Kansas City Medical College, 1876, of Myrtle Point, Ore., died recently at a hospital in Portland, Ore., aged 56.

Lisle C. Waters, M.D. Rush Medical College, Chicago, 1880, died at his home in Chicago, April 30, from anemia of the aorta, aged 54.

William Deegan, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1884, died at his home in Chicago, May 6.

James C. Rhodes, M.D. Geneva (N. Y.) Medical College, 1847, died May 1, at his home in Stillwater, Minn., aged 79.

Joseph B. Le Matty, M.D. Missouri Medical College, St. Louis, 1877, died at Bardolph, April 5, aged 56.

Henry Eversman, M.D. Medical College of Ohio, Cincinnati, 1861, died at Effingham, Ill., April 7, aged 66.

Elizabeth McKitterick, M.D. Woman's Medical College, Chicago, 1880, died recently at Guthrie, Okla.

Thomas H. Mangum, M.D., retired, of Trenton, Texas, died at his home in that place, April 29, aged 69.

William A. Noel, M.D. University of Louisville, 1843, of Pine Bluff, Ark., died recently.

R. B. Cotton, M.D. Toronto University, 1886, died in Regina, N. W. T., May 6, aged 48.

Deaths Abroad.

H. Gutschow, M.D., chief of the medical department of the German navy, died at Berlin, April 23.——**Felix Beetz, M.D.**, a former collaborator on the *Deutsche Med. Wochft.* and the *Reichs-Medizinal-Kalender*, died at Berlin, April 11, aged 54. ——**G. Nepveu, M.D.**, professor of pathologic anatomy at Marseilles, author of numerous works on surgery and bacteriology. ——**J. La Bonnardiere, M.D.**, professor of therapeutics at the French medical college of Beyrouth.——**M. Rio de la Loza, M.D.**, president of the section of medical physics and chemistry of the Mexican Academy of Medicine, died at Mexico, April 9.

Dr. F. Colzi, professor of surgery at Florence, one of the leading surgeons of Italy, died at Florence, April 10, aged 47, from the results of an accidental gunshot wound which shattered his forearm. Tetanus developed and proved rapidly fatal, notwithstanding amputation of the arm.

Dr. Anton Bumm, of Munich, professor of psychiatry, died at his home, April 13, from gallstone disease, aged 54.

Dr. E. Oehl, professor of physiology at Pavia, died April 5, aged 76.

Dr. G. von Veit, professor of gynecology at Bonn, 1863 to 1893, died at Gevelsdorf, April 20, aged 79.

State Boards of Registration.

The next Illinois examination will be in the Seventh Regiment Armory, Chicago, June 1 to 3. This is a special examination for physicians only. The next regular examination will be at the same place, July 22.

Texas.—The next meeting for the examination of applicants who desire to practice surgery, medicine and midwifery in Texas will be held in Austin, June 15. For blanks, rules and any other information, address Dr. M. M. Smith, the secretary, Austin, Texas.

New Hampshire.—The next examination will be held in Concord, June 23-24. By an amendment to the medical registration law, enacted by the legislature at the session of 1903, *hotel* physicians, employed by the landlord of a summer hotel in the care of his guests or employes, will hereafter be obliged to secure a license to practice, in accordance with Chapter 63 of the Session Laws of 1897. This license can be obtained only by examination.

Reciprocity.—There was held in Chicago, April 23, a meeting of the representatives of the medical examining boards of Indiana, Ohio, Iowa, Kansas, Michigan and Wisconsin. An organization was formed entitled the American Confederation of Reciprocating, Examining and Licensing Medical Boards of the United States of America, having for its object the establishing of reciprocal relations between the medical examining and licensing boards of the United States. The basis for reciprocal medical registration is stated as follows:

> For the purpose of establishing medical reciprocity among the states composing it, the American Confederation of Reciprocating Examining and Licensing Medical Boards does hereby agree to the following propositions as a basis of reciprocal medical registration:
>
> (*a*) That a prerequisite to reciprocal registration, the applicant therefor shall file in the office of the board of the state of which he is a licentiate such evidence as will enable the said board to certify that he is of good moral and professional character. Such certificate shall be filed with his application for reciprocal registration in *another state*.
>
> QUALIFICATION 1.
>
> (*b*) That a certificate of registration showing that an examination has been made by the proper board of any state, on which an average grade of not less than 75 per cent. was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in the state where reciprocal registration is sought, may be accepted, in lieu of examination, as evidence of qualification. Provided, that in case the scope of the said examination was less than that prescribed by the state in which registration is sought, the applicant may be required to submit to a supplemental examination by the board thereof in such subjects as have not been covered.
>
> QUALIFICATION 2.
>
> (*c*) That a certificate of registration, or license issued by the proper board of any state, may be accepted as evidence of qualification for reciprocal registration in any other state. Provided, that the holder thereof was, at the time of such registration, the legal possessor of a diploma issued by a medical college in good standing in the state in which reciprocal registration is sought, and that the date thereof was prior to the legal requirement of the examination test in such state.

Texas Report.—Dr. M. M. Smith, Austin, secretary of the Board of Medical Examiners for the State of Texas, reports the examination held at Austin, April 20 to 23, 1903, as follows: Subjects, 13; questions, 135; percentage required, 75; written examination; examined, 97; passed, 87; failed, 10, including one applicant for license as a midwife.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
E. Y. A.	R.	Univs. of Louisville and of Nashville	*	84
C. J.	R.	University of Louisville...........	1892	83
G. L. P.	R.	University of Louisville...........	1897	82
A. L. T.	R.	University of Louisville...........	1903	87
J. R. B.	R.	University of Ft. Worth..........	*	83
W. H. D.	R.	University of Ft. Worth..........	*	83
S. B.	R.	University of *Vienna*.............	1887	85
R. C. C.	R.	University of Texas..............	*	94
E. S. E.	R.	University of Texas..............	1903	90
B. F.	R.	University of Texas..............	1903	90
L. L. G.	R.	University of Texas..............	1903	90
G. H. G.	R.	University of Texas..............	1903	93
L. H. K.	R.	University of Texas..............	1903	96
A. T. K.	R.	University of Texas..............	1903	87
L. L. L.	R.	University of Texas..............	1903	85
J. F. M.	R.	University of Texas..............	*	89
E. G. M.	R.	University of Texas..............	1903	89
J. A. M.	R.	University of Texas..............	1903	93
J. W. R.	R.	University of Texas..............	1903	91
M. R. S.	R.	University of Texas..............	1902	93
P. E. S.	R.	University of Texas..............	1903	89
F. S.	R.	University of Texas..............	1903	93
J. T. W.	R.	University of Texas..............	1903	90
J. A. W.	R.	University of Texas..............	1903	91
Z. T. S.	R.	University of Texas..............	1903	94
C. A. S.	R.	University of Texas..............	*	89
J. L. T.	R.	University of Texas..............	1903	87
F. B. H.	R.	University of Texas and Tulane....	*	81
T. D. F.	R.	University of Dallas.............	*	78
N. E. F.	R.	University of Dallas.............	*	96
J. J. S.	R.	University of Dallas.............	*	87
E. C. W.	R.	University of Dallas.............	*	92
C. G. K.	R.	University of Dallas.............	1902	90
P. S. R.	R.	Univ. of Dallas and Barnes Med. Coll.	*	79
L. A. C.	R.	University of Nashville...........	*	88
J. D. M.	R.	University of Nashville...........	*	83
R. D. C.	R.	University of Nashville...........	*	85
J. S. C.	R.	University of Georgia............	1885	78
T. H. C.	R.	University of Tennessee..........	1903	87
C. B. H.	R.	University of Tennessee..........	1897	80
J. R. M.	R.	University of Tennessee..........	1903	82
B. U. S.	R.	University of Tennessee..........	*	84
F. D. S.	R.	University of Tennessee..........	1903	83
M. I. F.	R.	University of *Toronto*...........	1892	86
W. B. H.	R.	University of Alabama...........	1897	81
E. M. H.	R.	University of Arkansas..........	*	80
J. D. L.	R.	University of Arkansas..........	1894	84
I. V.	R.	University of Prague............	1874	82
A. H. W.	R.	University of Maryland..........	1902	91
J. M. Y.	R.	University of Virginia...........	1902	85
C. H. B.	R.	Tulane University	*	80
T. H. B.	R.	Tulane University	*	86
C. W. L.	R.	Tulane University	1899	87
G. H. B.	R.	Barnes Medical College..........	*	84
A. G. L.	R.	Barnes Medical College..........	1901	82
E. M.	R.	Barnes Medical College..........	*	83
W. M. M.	R.	Barnes Medical College..........	1896	75
J. C. B.	R.	Vanderbilt University	*	87
T. C. D.	R.	Vanderbilt University	1903	81
A. T. O.	R.	Vanderbilt University	1901	92
A. O. C.	R.	Vanderbilt University	1900	82
P. C. S.	R.	Vanderbilt University	1903	88
C. P. B.	R.	Rush Medical College...........	1902	92
W. L. B.	R.	Rush Medical College...........	1896	88
E. J. M.	R.	Rush Medical College...........	1886	88
B. F. S.	R.	Rush Medical College...........	1899	90
A. D. P.	R.	Rush Medical College...........	1899	90
W. T. B.	R.	Dallas Medical College..........	*	86
F. C.	R.	Jefferson Medical College........	1879	90
H. M. P.	R.	Jefferson Medical College........	1892	91
J. G.	R.	Illinois Medical College.........	1902	83
J. P. G.	R.	Columbia University	1901	88
T. M. G.	R.	Atlanta Medical College.........	1888	75
A. C. J.	R.	Atlanta College of Phys. and Surgs..	1902	83
J. W. G.	R.	Trinity University (Dallas, Tex.)...	1902	77
C. H. H.	R.	Louisville Medical College........	1903	86
G. K. T.	R.	Louisville Medical College........	1890	84
W. L. H.	R.	Louisville Medical College........	*	84
J. A. H.	R.	Missouri Medical College.........	1890	91
D. C. H.	R.	St. Louis College Phys. and Surgs...	*	80
H. L. J.	R.	Grant University	1903	75
W. P. K.	R.	[illegible] ge...........	1903	87
J. L. L.	R.	[illegible] s. and Surgs..	1902	88
M. M. R.	R.	[illegible] Med. Coll...	*	77
J. E. S.	R.	[illegible] ollege.......	1900	76
J. V.	R.	[illegible] co.........	1901	79
J. L. W.	R.	[illegible] ical College..	*	80

FAILED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
1	R.	Barnes Med. College..............	1899	67
2	R.	University of Dallas.............	*	69
5	R.	University of Dallas.............	*	71
4	R.	Univ. Dallas and St. Louis P. and S.	*	39
8	R.	University of Louisville..........	1894	67
3	R.	Chattanooga M. C. and Univ. Dallas.	*	72
6	R.	Vanderbilt University	1885	73
7	R.	Knoxville Medical College.........	*	68
9	R.	Memphis Hospital Medical College..	*	67

* Undergraduates.

Examination Board in Kentucky.—At the annual meeting of the Kentucky State Board of Health it was recommended that the board refuse recognition to the graduates of colleges where it could be proven that the college had cut fees from the advertised rates, or had violated other entrance requirements. A suggestion was made that the board amend its requirements so as to make it an examining board for the examinations of applicants to practice in the state, or that the legislature be petitioned to create an examining board, to be composed of men in no way connected with medical colleges. To meet this emergency it was stated that from this date no member of the present board will have any connection with a medical college.

Idaho Report.—Dr. R. L. Nourse, Hailey, secretary of the Idaho State Board of Medical Examiners, reports the examination held at Boise, April 7, 1903, as follows: Number of subjects examined in, 12; total questions, 120; percentage required to pass, 75; written examination; total number examined, 22; number passed, 13; failed, 9.

Candi-date.	Sch. of Pract.	PASSED. College.	Year Grad.	Per Cent.
1	R.	St. Louis Medical College..........	1872	71.8
2	R.	Toronto Medical College..........	1902	92.2
3	R.	Kansas City Medical College.......	1900	75.1
10	R.	Kansas City Medical College.......	1899	77.3
4	R.	Woman's Med. College, Kansas City.	1899	88.8
5	R.	University of Iowa..............	1880	91.5
16	R.	University of Michigan...........	1900	91.7
17	R.	University of Minnesota..........	1895	77.7
6	H.	Chicago Homeopathic Med. College..	1894	77.5
13	R.	Louisville Medical College..........	1903	84.6
14	R.	N. W. Woman's Med. College, Chicago	1901	84.7
15	R.	College P. and S., Chicago.........	1902	81.1
21	R.	Hospital Coll. of Medicine, Louisville.	1902	81.1
		FAILED.		
7	R.	Kentucky School of Medicine.......	1892	59.5
22	R.	Kentucky School of Med., Louisville.	1879	15.9
8	E.	American Med. College, St. Louis...	1890	56
11	R.	Barnes Medical College, St. Louis...	1902	62.9
12	R.	Harvey Medical College, Chicago....	1901	70.8
9	R.	Central Med. College, St. Joseph....	1897	74.5
18	R.	Louisville Medical College..........	1903	61
19	R.	University of Iowa..............	1887	67.6
20	R.	University Med. College, Kansas City	1897	69.4

Association News.

New Orleans Arrangement Committee Finds a Balance.

The Committee on Arrangements met at New Orleans, May 14, and found that after paying all bills there would be a balance on hand of $1,700. This saving resulted from there being less expense than had been planned for some receptions, and from an increase in the receipts from the exhibits over that which had been counted on. Of this balance, $750 was unanimously voted to the Confederate Reunion Committee, with which to entertain the veteran surgeons of the Army and Navy at their convention. In view of the courtesies extended by the Young Men's Christian Association, the Touro Synagogue and the Carondelet M. E. Church, and in appreciation of the use of their meeting halls, $25 was voted to each. The remainder of the surplus it was voted to contribute to the fund being raised for the establishment of a branch of the Pasteur Institute in New Orleans. The Committee passed a vote of thanks to the newspapers, telephone and telegraph companies, the clubs who extended courtesies, prominent citizens who assisted in various ways and to numerous other persons and bodies who assisted in making the New Orleans Session such a brilliant and successful convention. The Arrangement Committee then adjourned sine die.

Medical Organization.

Manhattan (Kan.) Medical Society.

Nine physicians of Manhattan met, April 20, and organized a medical society with the following temporary officers: Chairman, Dr. Charles F. Little; secretary, Dr. James D. Colt, Jr.

Carroll County (Ga.) Medical Society.

The physicians of Carroll County met at Carrollton for organization and elected Dr. Buna C. Powell, Villa Rica, president; Dr. W. Lee Fitts, Carrollton, vice-president; and Dr. J. F. Cole, Carrollton, secretary and treasurer.

Cedar County (Iowa) Medical Society.

This society perfected its organization at Tipton, April 29, by adopting a constitution and by-laws and electing the following officers: Dr. L. W. Baker, Stanwood, president; Dr. H. R. Chapman, Bennett, vice-president; Dr. Roscoe A. Nash, Tipton, secretary, and Dr. Louis J. Leech, West Branch, treasurer.

Lyon County (Kan.) Medical Society.

At the annual meeting held in Emporia, May 5, the society voted to affiliate with the district and state societies along the lines suggested by the American Medical Association. Dr. John M. Parrington was elected president; Dr. Frank A. Eckdall, vice-president, and Dr. John M. Poindexter, secretary and treasurer, all of Emporia.

Crawford County (Ohio) Medical Society.

Representative medical men of Galion, New Washington, Crestline and Bucyrus, met at the latter city, May 1, and after an address by Dr. Theodore W. Rankin, Columbus, councilor for the sixth district, perfected organization by adopting a constitution and by-laws in conformity with that suggested by the American Medical Association, and electing the following officers: Dr. Burton R. Miller, New Washington, president; Dr. Thomas L. Brown, Galion, vice-president; Dr. Robert S. Reid, Bucyrus, secretary; Dr. Charles E. Trimble, Crestline, treasurer, and Dr. Arthur M. Duncan, Bucyrus, delegate to the state society.

Societies.

COMING MEETINGS.

Indian Territory Medical Association, South McAlester, June 2-3.
Medical Society of the State of North Carolina, Hot Springs, June 2.
Ohio State Medical Society, Dayton, June 3-5.
Rhode Island Medical Society, Providence, June 4.
Wisconsin State Medical Society, Milwaukee, June 3-5.
Maine Medical Association, Portland, June 3-5.
Indiana State Medical Society, Richmond, June 4-5.
Medical Society of Delaware, Dover, June 9.
Massachusetts Medical Society, Boston, June 9-10.
Michigan State Medical Society, Detroit, June 11-12.
Minnesota State Medical Society, St. Paul, June 17.
Medical Association of Montana, Helena, June 17-18.
Medical Society of New Jersey, Asbury Park, June 23-25.

The University of Toronto alumni, resident in California, held their first meeting March 27. The organization starts out with a membership of 22. There are nearly 60 graduates and undergraduates in California.

Medical Association of the District of Columbia.—The annual meeting was held in Washington, April 7, at which the following officers were elected: President, Dr. Albert F. A. King; vice-presidents, Drs. Raymond T. Holden, and Louis Mackall, Jr.; secretary, Dr. Daniel W. Prentiss, and treasurer, Dr. Frank Leech, all of Washington.

Litchfield County (Conn.) Medical Association.—This association, the oldest of its kind in the United States, held its one hundred and thirty-ninth annual meeting at Winsted, April 29. Dr. Jerome S. Bissell, Torrington, president; Dr. George H. Knight, Lakeville, vice-president; Dr. Albert E. Cobbs, Falls Village, secretary and treasurer, and Dr. William S. Hulbert, Winsted, reporter.

Sanitary Officers of Baltimore County.—At the meeting at Towson, May 6, the following officers were elected: Dr. James F. H. Gorsuch, Fork, president; and Dr. T. Ross Payne, Corbett, secretary. A resolution was adopted exonerating Dr. John C. Schofield, Baltimore, from any blame for the escape of smallpox suspects from the Homburgville camp, which had been criticised so severely by the health commissioner of Baltimore.

Western Alumni Association of the University and Bellevue Hospital Medical College.—The third annual meeting and banquet was held in Chicago, April 30. Dr. George N. Kreider, Springfield, Ill., was the toastmaster. The following officers were elected: President, Dr. David W. Graham, Chicago; vice-presidents, Drs. Charles C. Hunt, Dixon, Ill., Joseph M. Patton, Chicago, and James A. Duncan, Toledo, Ohio; secretary, Dr. Willis O. Nance, Chicago, and treasurer, Dr. Calvin M. Fitch, Chicago.

Johns Hopkins Medical School has required the bachelor's degree for admission, and that such is now the requirement of the medical school of Harvard and that of Baltimore University. The medical school of Western Reserve University requires the equivalent of three college years; the medical school of the universities of Michigan and Chicago two, and of the University of Minnesota one. Other leading institutions emphasize the need of a general education as preliminary to medical study by encouraging the taking of a bachelor's degree before asking of them matriculation in medicine. The presidents of Yale, Columbia, Harvard and Cornell have given lengthy consideration to this matter in late reports, President Eliot advocating the bachelor's degree before professional study, and President Butler declaring it is the settled policy at Columbia that its technical and professional schools shall rest on a college course, though not necessarily four years of liberal study.

A National College Association.

No platform was adopted by this conference, nor was any policy formulated, but the conference ordained its own perpetuation in the appointment of a committee, President James, chairman, to select a commission of fifteen, which should report a program and plan of organization and membership one year hence, by this act providing for a new factor in the control of higher education in this country—a national college association.

The Speakers on the Medical Standpoint.

The subjects discussed by the conference were:

> Has the college a field peculiar to itself, not covered by the technical school or by the demands of preparation for the professional school?
>
> Is it desirable that the college course should be reduced in time from four to three or even two years and correspondingly in amount of work?
>
> What subjects in the typical college course can be accepted by the professional school as qualifying in part for the professional degree so as to shorten the time required for graduation in the professional school?
>
> If reduction is allowed, should it be (*a*) by acceptance of credits in the college of liberal arts for work done in the professional school, or (*b*) by acceptance in professional school for work done in the college of liberal arts, or (*c*) by combining these plans?
>
> The relation of the technical school to the college.

On the third topic the speakers of professional training and connections, who sought to show how the independent college and the professional school, independent or with university relations, might work together and so shorten the period of their several courses, were Dr. Arthur R. Edwards, of the Northwestern University Medical School; Dr. R. McE. Schauffler, secretary of the faculty of the Kansas City Medical College; Dr. Frances Dickinson, dean of Harvey Medical College, and Prof. W. A. Locey, of the chair of zoology in Northwestern University. Dr. Edwards held that if medicine grows in the next ten years as it has in the last a medical course will require five or six years of study, and the courses of the college and medical school must overlap. He would have the college teach some of the sciences that are preparatory to medicine, for instance, chemistry and the principles of anatomy and histology, and so would demand of the college course that it do 60 to 80 per cent. of the work done in the first year of the medical school. In such way he would base a degree on a six years' pursuit of continued courses. On the other hand, from the point of view of the college, Professor Locey held that such work as the professional school offered for allowances in the college of liberal arts should be work done in a broad and liberal, and not an ultra-professional spirit. So taught, chemistry, physiology, histology, embryology, neurology, bacteriology and pathology, all sciences contributing to a knowledge of organic nature, might be accepted by the college.

Dr. Dickinson contended that high school graduates are not fitted for medicine, and that some college training is essential to medical study. In most medical schools, she said, the first two years belong to the college courses. Dr. Dickinson plead for one year's advance standing for five or more years of business training.

The Need of a College Course Foundation.

Dr. Schauffler said that, as a graduate of the medical department of Columbia, he wanted to say that although President Butler says that to require an A.B. for admission is economically impossible, and from the standpoint of social service unwise, nevertheless, one quiz master in that institution was not afraid to make a bachelor's degree an absolute condition for entrance to his quiz. With fifteen men from small colleges and from the academic departments of Yale and Princeton, taught largely in his office by methods of college rather than university, he took all three of the prizes at Columbia and in competition with all medical colleges in New York and many other centers east took twelve of the thirty best hospital appointments in the city. This was not for one year, but was about his average. Dr. Schauffler further said that he never knew of a man from the short-cut Columbia combined course who ever took a Harzen prize or secured a conspicuously good hospital appointment. It often happened that some other student, even one direct from a secondary school, by fine memory and application, stood higher on theoretical work than the Eliot quiz man, but when it came to practical examination in the diagnosis of unknown cases the ability to reason quickly and correctly, the poise, as some one here to-day has said, the "flexibility" of the college graduate always carried him through the ordeal successfully. What is the present situation? We are giving one year's credit on the medical course for an A.B. degree. The theory of this credit is involved in the question, "What subjects in the college course may be accepted for credit in the medical course?" We should say physics, biology, including histology and embryology, chemistry, physiology, comparative anatomy and botany, with a trend toward pharmacy, However, many of these subjects are the ones which, from lack of equipment or sufficiently large faculties, are most poorly taught in the colleges surrounding us. The year's credit for the A.B. is then often unsatisfactory, but we can struggle along with it. He said further:

> Now comes the proposition from the universities to give the combined course in six years. It is flatly impossible for us to give two years' credit for the bachelor's degree. You may say that if the independent school can not stand the competition it must, in the course of evolution, go to the wall. That day must be sometime distant, however, in our part of the country, where the neighboring state universities are in small towns and can not, for lack of clinical facilities, entirely replace the city school. We are not whining over the pressure which comes from the universities on account of wealth and enlarged facilities. While it is requiring much effort and sacrifice, we must hold our own or we are not worthy to survive. What we do object to is the university throwing in an A.B. degree "to boot" for only two years, as an inducement to the student to spend his entire time within its walls. Until it is accepted by a reasonable majority of institutions that two years is sufficient time for a college course, we hold that this action is an effort to take an unfair advantage.
>
> Of course we can immediately seek alliances with independent colleges surrounding us for joint traffic arrangements. As local conditions are at present in the West this will lead to much confusion and, moreover, give an opportunity for the college which is not over-scrupulous in its scramble for students to let down the bars just at a time when there seems hope of enforcing uniformity and thoroughness in medical education.
>
> In my opinion our *goal, which we can not* in the West reach at a single bound, is:
>
> 1. Two years of a college course as a requirement for admission to a medical school.
> 2. No advanced *standing for a degree per se,* but only for specific groups of scientific subjects which adequately cover part of the first and second years of the medical course.

AMERICAN UROLOGICAL ASSOCIATION.

Second Annual Meeting, New Orleans, May 8 and 9, 1903.

The President, Dr. Ramon Guiteras, New York, in the Chair.

The Present Status of Urology in the United States.

Dr. Guiteras, in his president's address, reviewed urology as a specialty, distinct from surgery in general. He showed what this Association, modeled on the plan of the Societe d'Urologie Francaise, even in its brief existence, had done to establish the separate existence of urology. He further showed the need of such an organization which but a year ago had its first annual meeting. It then counted but forty members, while now it has over 150 of the most eminent men in our land.

Drs. Lydston, Guiteras and Valentine showed instruments.

The Diagnosis of Tuberculosis of the Kidney and Ureter.

Dr. J. Wesley Bovée, Washington, emphasized the need of establishing a positive or negative diagnosis, not only by cystoscopy but also by cultures and animal inoculations, by determining the presence or absence of the tubercle bacilli.

Prostatectomy.

Dr. John B. Murphy, Chicago, gives preference to the radical operation over any of the palliative measures advocated.

Dr. Willy Meyer, New York, recited the results in fifty-nine prostatics on whom he had operated by the Bottini incisor in the past five years. His experience in these cases led him to advocate the use of the Bottini instrument.

Dr. Granville MacGowan, Los Angeles, reported a patient whose prostate he had enucleated for sarcoma. As the patient had had no recurrence in four years and finally died from other causes, the author believed that early radical operation in such cases should be performed.

DISCUSSION.

Dr. McRae believed that the suprapubic operation for prostatectomy was the easier operation for the surgeon with a good sense of touch and not afraid of the bugbear of hemorrhage. He believed continuous catheterization was an important measure.

Dr. Ferguson, Chicago, believed the perineal route was the operation of choice and the route to take in the large majority of cases. He described his method of procedure and preferred removing the prostate piecemeal. The tendency to do a complete prostatectomy, he thought, was passing, and more attention being given to the removal of the obstruction only.

Dr. Lydston, Chicago, condemned any *tendency to routinism* and did not believe that any considerable number of cases could be operated on by any one method. There was a time when he thought the suprapubic method was the proper one. He now believes that the combined method is the ideal way, though, unfortunately, we usually have a septic bladder to deal with. The cases are usually brought because nothing else can be done for them, and they have infected bladders and surgical kidneys. For this reason he emphasized the need for earlier operations in most cases, and thought the results would then be as favorable as in operations on other portions of the tract.

Dr. MacGowan said that wherever we have reason to suspect cancer of the prostate we should use the Bottini operation. There is practically no danger from hemorrhage. Wherever the patient is too weak to be confined to bed for any considerable time, use the Bottini method. Wherever the collection of urea is below 20 g. per day, use the Bottini method.

Dr. Guiteras spoke from the standpoint of prostatic obstruction, the object of the operation being to enable the patient to empty his bladder, or as nearly as possible the actual size of the prostate remaining a secondary question. Formerly he had been enthusiastic in advocating the suprapubic operation, but has now almost abandoned it and would perform this operation only in cases where the prostate was high up on the bladder. In attacking through the perineum he employs a large perineal tube and leaves this in position for a week or ten days. This gives the space where the prostate has been a chance to close up. As an aid to the finger he advocated the use of the prostatic depressor which enables the operator to push the prostate down into reach. There are two varieties of prostatic enlargement—the variety which can be shelled out and the variety which causes an obstruction in the floor of the prostate, where there is a collar or some deformity preventing the patient from emptying his bladder, and these are the cases for the Bottini operation. He believed the Bottini operation has a high place in prostatic surgery.

Retention of Urine.

Drs. Ferd C. Valentine and **T. M. Townsend**, New York, subsequent to analyzing the causes of retention, showed that the emergency is entirely within the general practitioner's field. They pointed out the method by which each kind of emergency must be met and the technic thereof.

DISCUSSION.

Dr. Lydston said the relation of this society to the general practitioner is largely educational. Only the specialist sees the result of injudicious work done by the practitioner in his efforts to relieve retention. He said there are still some physicians who think it perfectly proper to lubricate the catheter with the soap at the office sink. He thought more emphasis should be placed on the danger of complete and sudden emptying of the bladder after prolonged retention.

Dr. Shelbine, Texas, mentioned the case of a patient having lost the catheter which slipped back into the bladder. Suprapubic cystotomy was performed and the catheter recovered.

Dr. Guiteras thought the lithotrite might have been used for the recovery of the catheter.

Dr. Valentine said the case was of practical interest. He had three cases where he was sure the reflex swelling would take the catheter into the bladder very rapidly should it be released.

AMERICAN ACADEMY OF MEDICINE.

Twenty-eighth Annual Meeting, held in Washington, D. C., May 11, 12, 1903.

The President, Dr. Charles McIntire, Easton, Pa., in the Chair.

Drs. Helen C. Putnam, Edward Jackson and George G. Groff were appointed a committee to report on the teaching of school hygiene at the next annual session.

Time Allowance in the Combined Collegiate and Medical Course.

Dr. A. L. Benedict, Buffalo, stated that a large number of replies had been received to communications sent to colleges, medical schools and universities by his committee. Some conclusions drawn were that it will be impracticable for many years to insist on the basis of a bachelor's degree as a preliminary to a medical training; that it may be expected that all of the more densely populated states will have insisted on a full high-school education for medical students within a few years; that a combination collegiate and medical course of six or seven years will produce a higher average attainment than the admission of the high school and college graduates to the medical school on precisely the same basis; that the combination course is not to be considered as compromising the educational value of the college course or the technical value of the medical, provided, that a suitable arrangement of details is made; that the segregated medical colleges manifest the tendency to minimize the importance of mental training and broad culture and to exaggerate the importance of purely technical facts; that unless it be granted that the tendency to the destruction of the independent college and to the inferiority of the independent medical school is inevitable and desirable, voluntary co-operation and legislative control must be invoked in the interests of such institutions.

Results of the State Examinations for Medical Licensure in 1902.

Dr. Charles McIntire made a report, giving the results of examinations in all states arranged by colleges.

Dr. H. Bert Ellis, Los Angeles, Cal., read a paper on "The Necessity for a National Bureau of Medicines and Foods."

The Life and Education of Our Girls as Affecting Their Future.

Dr. James H. McBride, Pasadena, Cal., in a paper on this subject, urged the necessity of good physical development as a foundation for mental development. He referred to the necessity of girls knowing something of the duties of home life and of the responsibilities of motherhood. He stated:

> The mind is the highest expression of human life. Our ancestors shaped our bodies by their lives. Their lives afforded them exercise. We need to find something to develop our bodies now that our mode of living has changed. Especially true is this of woman, whose greater complexity and more delicate organism makes it important that she lay a good physical foundation.

Overstudy, unhygienic dress, and fictitious animation are common causes of nervous disorder and other forms of ill health in girls and women. The highest ideal for girlhood, he said, is thorough womanhood.

DISCUSSION.

Dr. S. A. Knopf, New York City, believed that the American women have improved in physical development very wonderfully in the last twenty-five years. In the better classes of society investigation would show that physically women had gained more, proportionately, than men; possibly this was true morally and mentally. On the other hand, in the lower classes of society, the development of women had been sadly neglected, particularly through the curse of child labor. This is particularly so in the eastern states. Regarding the education of children, he believed that the superintendents of the public schools should be educated to cut down the curriculum and to pay more attention to the physical development of the children.

The Teaching of Hygiene in the Public Schools.

The afternoon was devoted to a symposium on the above subject.

Dr. Walter L. Pyle, Philadelphia, read a paper entitled "The Teaching of Personal Hygiene." Dr. Pyle contended that what is needed is simple instruction by capable teachers in the proper care and use of the body, authoritatively based on the best available modern, anatomic, physiologic and hygienic data. The aim should be to give every man fundamental knowledge that will enable him to understand and if necessary formulate the requisite rules of health, and to distinguish scientific medicine from quackery. He strongly urged more literature and personal explanation in this direction from the medical profession. The instruction should be begun before habits of carelessness and indifference are formed. Teachers should be trained in the proper care and use of the human body in order to give this instruction.

Dr. George G. Groff, Lewisburg, Pa., presented a paper on "Physiology vs. Hygiene in Our Public Schools," which was read by the secretary. Dr. Groff said that anatomy and physiology should not be taught young children because the subjects are in the main beyond their comprehension; teachers are not prepared to teach the subjects; the impressions received by young children are unfavorable when anatomic structures and physiologic processes are displayed to them. Plain hygienic instruction can be readily comprehended without anatomy or physiology. Physiology as physiology he would not have taught below the grade of the high school, because teachers have no adequate knowledge of the subject; and because, until this time, pupils are not prepared for it. Personal hygiene is best taught to young children through incidental talks given at suitable times. Existing text-books need revision, he stated, in reference to loose generalized statements, inaccurate statements and statements actually false. Numerous examples of gross misstatements were cited.

The Teaching of Physiologic Breathing.

Dr. G. Hudson Makuen, Philadelphia, said it has been estimated that there are in the United States alone more than 300,000 stammerers, and that a study of this distressing affliction as manifested in several hundred cases has led him to the conclusion that its chief cause is faulty breathing in childhood. Still more serious is the result of faulty breathing on health and general development. Many grave diseases of childhood may be traced directly to the impoverished condition of the blood due to inadequate oxidation. The important factor is the unnatural and cramped position assumed by children in school. The importance therefore of establishing correct physical habits during school life can not be overestimated. He would have the teachers insist on the children taking correct positions at all times as a preliminary to physiologic breathing. Physical obstruction to normal breathing should be removed as early as possible. All breathing exercises are harmful when they are obstructed in the respiratory tract. As an examination of the eye is insisted on in the schools, so would he insist on an examination of the respiratory tract. It has been estimated that about 70 per cent. of people fail to use the nose in breathing at night, and in so doing fail to get the 20 to 40 per cent. of heat and the 60 per cent. of moisture in the respired air that should come from the nasal passages, and, moreover, they take into the throat countless germs that would otherwise find lodgment in the vestibules to the nostrils.

Dr. Makuen quoted the census of 1900 as showing that about 40 per cent. of the deaths occurring between 20 and 50 years were due to diseases of the respiratory tract. He is convinced that faulty breathing is an important factor in the causation of this great mortality, and that the percentage may be reduced by the scientific teaching of physiologic breathing.

Teaching of School Hygiene.

Dr. Helen C. Putnam, Providence, R. I., in the next paper, maintained that the head of the department of hygiene in public schools should have medical and liberal degrees, five years' private practice and at least two years' special study of pedagogics, gymnastics and school sanitation. The department should conduct medical inspection, supervise sanitation and teach hygiene in theory and practice. The staff of the head of the department should comprise inspectors who are qualified physicians; teachers of hygiene, college and normal graduates who took scientific electives; of physical training and "domestic science," from special schools. It is suggested that the department can be established by city authorities, though this would be less satisfactory than by private endowment. In the private endowment plan one advantage is a special committee, safe from political influence, to administer the funds.

Methods in Michigan Schools.

Dr. Victor C. Vaughan, Ann Arbor, Mich., reviewed the attempts made in Michigan to secure instruction in hygiene in public schools. Under authority of the State Board of Health a monthly sanitary bulletin is sent free to every teacher in the state. This plan has been found to work satisfactorily.

The Training of Teachers of Hygiene.

Dr. Thomas D. Wood, New York, maintained (in a paper read by Dr. Edward Jackson) that every teacher in the public schools should be a teacher of hygiene and the art of health, and should be in personality and conduct an example of rational living. There should be thoroughly trained special teachers of hygiene to supervise the instruction given in matters of health by the general teacher. The general teachers should be trained in the normal schools for this health instruction by course in biology, physiology, personal and school hygiene and sanitation.

DISCUSSION.

Hon. William T. Harris, U. S. Commissioner of Education, Washington, D. C., stated that with the matter of hygiene in the public schools in the hands of regular physicians great improvement would be brought about. The gymnastic exercises popular in the public schools he feels rob the brain of nervous energy and, if vigorous, can not be good for the child after a hard lesson. The only result of calisthenics under such conditions is to give a tendency toward nervous dyspepsia. The only aid in the teaching of hygiene in the public schools he felt must come from the medical profession.

Dr. S. A. Knopf, New York City, said practical hygiene could be taught a child of 4 or 5 years, in that it could be taught that it should not kiss its neighbors on the mouth, and that when it had dirty finger nails it should not scratch itself, and that a cut finger should be allowed to bleed, put under clean water and wrapped up. When the child gets older it should be taught not to expectorate on the floor and that all expectoration contains what are called pathogenic micro-organisms. In his own practice many tuberculous patients did not know what it meant to take a deep breath. In the teaching of school hygiene in New York they have experimented in having the nurse attached to the school, go to the home and teach the mother how to take care of a child sent to the school suffering with any skin disease. One practical lesson in hygiene taught the mother he thinks of more value than many to the children. In addition to the sanitary bulletin issued to the teachers mentioned by Dr. Vaughan, he would have leaflets on hygiene sent to the pupils.

Dr. F. H. Gerrish, Portland, said that if there were no teaching of hygiene at the present time it would be comparatively easy to institute a good method. The pernicious method now in vogue could be readily understood by an examination of some of the books recommended.

Dr. James H. McBride, in reference to faulty positions of school children, said that many a child seemed dull because he was not taught to sit up and keep his muscles in harmony with his mental attitude. He suggests that a school of hygiene for physicians might be of value.

Dr. W. R. White, Providence, thought the experiment described by Dr. Putnam an extremely practical one. He thinks the time is coming when the school physician will have his proper position, and that the instruction which the head of this department would give through his assistants to teachers, enabling them to distinguish early the symptoms of different diseases, would be of the utmost value in the saving of time and of public money.

Dr. A. L. Benedict, Buffalo, thought a sharp distinction should be made between hygiene and the teaching of hygiene. Both are important subjects and it is difficult to avoid confusing them.

Dr. Edward Jackson, Denver, believed that the teaching of hygiene by the wholesome, healthful life is the supreme object. It is not the teaching of hygiene as a special technical branch which deals with the periods of incubation of certain diseases or the particular way in which certain bacterium is transmitted, but the teaching of the healthful life; and, in these discussions, the personal hygiene, he thought, was too much lost sight of. The important thing in school hygiene is to have the supervisor of the right sort. While he does not think the present system of school hygiene altogether a hindrance, as had been indicated, he thought it a matter of shame to the medical profession that these laws had been framed, passed and enforced in nearly all the states by persons who had no intelligent comprehension of what the teaching of hygiene should be.

Dr. G. Hudson Makuen believes that the value of the gymnastic exercises is not alone in throwing the windows open and getting fresh air into the school room, not so much in the exercise of the muscles, but in the exercise of the mental faculty, the faculty of attention and of imitation. He believes that the calisthenic exercises have in them elements of psychical development not found in the average school work and study.

At 8 p. m., the president, Dr. Charles McIntire, gave his address on "Muck-Rake Methods in Medical Practice."

(*To be continued.*)

AMERICAN GYNECOLOGICAL SOCIETY.

Twenty-eighth Annual Meeting, held in Washington, D. C., May 12 to 14, 1903.

(*Continued from page 1447.*)

Myomectomy or Hysterectomy.

Dr. Joseph Taber Johnson, Washington, D. C., said the treatment depended on the size, variety and location of the tumor, as well as the size of the pregnancy. Myomectomy in favorable cases should be the operation of election. However, cases occasionally present themselves with such urgent symptoms as to require supravaginal hysterectomy as a life-saving operation. He described briefly successful operations of both varieties. He discussed the questions of abdominal and pelvic operations during pregnancy; also the propriety of inducing premature labor, as well as the policy of trusting to the *vis medicatrix naturæ*.

Pregnancy and Labor Complicated by Myomata.

Dr. George Tucker Harrison, New York, followed. No general rules can be laid down with reference to the treatment, as each case must be carefully studied in all its circumstances before recourse is had to operative intervention. The dangers of this complication of pregnancy as a cause of dystocia were formerly over-estimated. The plan of treatment during pregnancy, as a rule, is an expectant one.

Discussion on Fibroids, Etc.

Dr. Edward Reynolds, Boston, spoke of the treatment of large incarcerated fibroids, at or near term, in advance of the fetal head. He has seen ten such cases. No one of these tumors was smaller than the seventh month fetal head. In each instance the woman was delivered either normally or by forceps.

Dr. J. Duncan Emmet, New York, said there is no question but that certain myomata must be removed either by myomectomy or by the radical removal of the uterus, while there are other cases in which the tumors do not interfere with the course of pregnancy. He was glad one of the essayists had emphasized a preference for myomectomy rather than the removal of the uterus, for the reason that the latter is such a serious procedure in its after-effects, etc.

Dr. Wm. R. Pryor, New York, expressed himself in favor of conservatism in the treatment of fibroids associated with or complicating pregnancy. If the tumors are situated in the anterior wall of the uterus, and are very small, they would slide up over the pubes without much trouble. Even before the seventh month, while some of these tumors may seem to be an actual bar to delivery, they accommodate themselves by their softness to the situation. Subperitoneal fibroid tumors complicating pregnancy demand operation, as a rule.

Dr. Henry D. Fry, Washington, D. C., spoke of emptying the uterus, saying he thought the cases are rare where this procedure is called for. The treatment is either expectant or radical. Those tumors which indicate emptying the uterus are necessarily located in the lower uterine segment, and yet some of these occasionally rise in the pelvis and give very little or no trouble.

Dr. Walter P. Manton, Detroit, looked on cases of fibroid tumors complicating pregnancy as very rare. Personally, he has seen but six such cases out of approximately five or six thousand cases of labor in both private and hospital practice. In the majority of cases of interstitial submucous fibroids, abortion almost inevitably occurs between the third and fifth months.

Dr. Reuben Peterson, Ann Arbor, Mich., spoke of a case on which he had operated. The tumor was located in the lower uterine segment, and was of the interstitial variety. He did a myomectomy, the woman went on to full term and was delivered of a child.

Dr. George J. Engelmann, Boston, had twice seen the disappearance of fibroids following confinement.

The symposium was further discussed by Drs. Charles M. Green of Boston; Arthur W. Johnstone of Cincinnati; James Clifton Edgar of New York City, and the discussion closed by the essayists.

Combined Bisection of Tumors and Uterus, with Enucleation of the Former, in Abdominal Hysterectomy for Large Fibroid Tumors.

Dr. George H. Noble, Atlanta, Ga., read a paper entitled as above. In case of large fibroid tumors in the body of the uterus the author recommends bisecting the tumor, bisecting the uterus and then enucleating the bisected tumor. In intraligamentous tumors the uterus should be bisected, the capsule of the tumor penetrated from the cavity of the uterus and the tumor enucleated from its capsule.

The advantages of this method are: Saving of time, prevention of hemorrhage, increased working space, easy manipulation, accessibility to the blood supply in the deep pelvis, and freedom from liability of injury to the ureters and uterine arteries.

Dr Noble then discussed "The Enucleation of Intraligamentous and Postperitoneal Fibroid Tumors in the Deep Pelvis." He stated that he had received a reprint from Dr. Pryor, in which Pryor anticipated him in the treatment of intraligamentous tumors or postperitoneal fibroids in the deep pelvis. As the principle is the same, and both of them only differ in technic, the essayist indorses it. Intraligamentous tumors are partially enucleated by penetrating their capsules from the cavity of the uterus after bisecting the organ. They should be turned out with the fingers and morcellation forceps, then drawn up and rotated outward as described. The portion of the tumor attached to the capsule everts the latter as it is drawn out of the abdominal incision, and often to such a surprising extent that it may be included in the ligature placed around the upper border of the broad ligament. In this way the capsule in some cases may be entirely removed, and in others only cut away, and, if within the ligature of the pedicle, avoids the necessity of suturing the edges of the capsule. He said that Dr. Pryor did complete enucleation of the tumor and sutured the capsule, while he partially enucleated the tumor, utilizing its attached portion to pull up the capsule, transfix and tie off, in part or entire, with the ligature of the broad ligament.

The Relation and Corelation of Gynecologic and Nervous Affections.

Dr. Chauncey D. Palmer, Cincinnati, spoke of this relationship from two standpoints: (1) What influence do female pelvic diseases have in the induction of nervous disorders? (2) What affections of the female pelvic organs arise from nervous derangements?

He ruled out any thought of the occurrence of any organic, so-called structural, lesions of the nervous system, as resulting, unless indirectly and quite remotely, from pelvic diseases. The morbid changes to which reference was made were hysteria, neurasthenia, neuralgia, chorea, epilepsy, hystero-epilepsy, certain paralyses, migraine, convulsions of certain kind, including tetanus, also mental aberrations and vasomotor changes.

While many hysterical women have no anomaly of the sexual organs, a certain proportion of them have some imperfection in the development of their sexual apparatus, especially the uterus. Hence, the justifiability of an oöphorectomy in some such cases. Should the sexual organs be diseased in hysterical women, one could not say that the hysteria was secondary. Psychical causes are at work which are more potent than the local disease.

Errors in diet, in general hygiene, in lack of rest, and in various indulgences of the mind and body in girlhood, lead to physical anomalies and give rise to abnormal mobilities of the nervous system. The functions of ovulation and menstruation play more than the ordinary rôle in the inauguration of nervous phenomena.

The author spoke of cases of insanity having been promptly relieved by gynecologic operations. Likewise, insanity had immediately followed operations. Such sequelæ were probably more common than after other operations.

In the treatment of women for the special diseases of their sex there is too much of a tendency to place undue stress on real or supposed lesions of her reproductive organs. This is particularly true in reference to some so-called ovarian affections. Gynecology of to-day would not amount to much without an appropriate surgery, but indiscreet surgery, like overmedication, may be an abuse. Every theory in medicine must be the outgrowth of an extended experience. "Knowledge comes, but wisdom lingers."

The Etiology, Pathology and Treatment of Puerperal Sepsis.

Dr. Hiram N. Vineberg, New York, contributed this paper. Severe sepsis may be caused by a variety of pathogenic germs. The variety of germs found in the uterine discharge in a given case is no criterion of the severity of the case, and forms no safe guide as to prognosis or as to the treatment to be adopted. Bacteriologic examination of the blood is of little value, either from a prognostic or therapeutic standpoint. The treatment of puerperal sepsis must be based chiefly on the clinical history and physical signs of each individual case. Wounds or infection in the perineum, vagina or cervix are to be treated on the general surgical principles of irrigation and drainage. Curettage is indicated where there are evidences of placental decidual residue in the uterus independent of the variety of bacteria that may be found in the uterine cavity. In those rare cases in which adherent and sloughing placental tissue can not be removed, either with the sharp curette or fingers, hysterectomy is indicated, provided the patient is not already moribund. Hysterectomy is also indicated in cases of septic endometritis or infection of the placental site, so long as the infection is still limited to the uterus, and when the symptoms steadily grow worse in spite of uterine irrigation, with or without curettage, and appropriate hygienic stimulating treatment.

In abscess of the uterus the abdomen should be opened, and, when feasible, the purulent foci should be drained and the uterus preserved. If the uterus be studded with small abscesses hysterectomy is indicated. The abdominal is to be preferred to the vaginal route for hysterectomy. If the infection has passed from the uterus into one or other tube, and has set up a violent grade of inflammation, the abdomen should be opened and the infected tube removed before a general peritonitis develops. When the infection has passed through the uterus, and has set up a general peritonitis, a case might occasionally be saved by a timely abdominal section and drainage. In cases of parametric exudates the treatment should be conservative, and surgical intervention is indicated only when there are evidences of pus formation. In obscure cases in which the pathologic lesion can not be determined, and the symptoms are steadily growing worse, it may be advisable to open the abdomen to search for a hidden purulent focus, or for a circumscribed slough of the uterus. The procedure proposed by Trendelenburg, and executed by him and others, of ligating the pelvic veins when they have become infected and thrombosed, is worthy of further trial.

DISCUSSION.

Dr. Wm. R. Pryor, New York City, took issue with the essayist in regard to the significance of certain pathogenic germs. In mild cases of puerperal sepsis, very rarely is the streptococcus present, while in the severe ones streptococci are found. In the mild forms of the disease many other kinds of germs are found, chiefly staphylococci and saprophytic bacteria. The form of puerperal sepsis which demands careful attention is due to the streptococcus.

Dr. Edwin B. Cragin, New York City, related his experience at the Sloane Maternity. In this institution infection occasionally occurs, because cases are taken undelivered, no matter whether they have been handled by midwives or by beginners. Women are admitted whether they are just in labor or whether they have been in labor for several days. Occasionally a patient has been lost from puerperal infection, although pathologist and bacteriologist were unable to find the streptococcus. A number of severe cases have been observed in this maternity in which a variety of bacteria were found in the uterus. In the management of puerperal sepsis he emphasized two points: First, to make sure the uterus is emptied. Second, in making sure that it is emptied, do just as little damage to the inside of the organ as possible.

Dr. J. Whitridge Williams, Baltimore, laid stress on the value of bacteriologic examinations of the uterine lochia and of the blood. In many cases there is no definite indication for treatment from such examinations, yet there is no doubt in his mind that important and valuable information as to the condition of the patient can be elicited in this way, more particularly by examining the blood. He has seen but two cases of puerperal sepsis in which he feels operation was distinctly called for.

Dr. Matthew D. Mann, Buffalo, N. Y., spoke of gonorrheal infection in connection with the puerperium. Recently he saw a patient in consultation who had been sick for more than a week when she was first observed by him. Her temperature reached 111 before death. She had been having a temperature of from 107 to 108 for a number of days. Pulse was 120. Examination of the discharges by competent bacteriologists showed a pure culture of the gonococcus. There was no other germ present in any of the secretions. He thought the infection would localize itself and the woman would recover; but the joints and heart became affected and the patient died.

Dr. G. Gill Wylie, New York City, said there can be no question but that surgical intervention is indicated in some of the severe cases of puerperal sepsis. Of his first nine cases, which were treated at the Bellevue Hospital some twenty years ago, seven were dealt with locally and two surgically. He believes the uterus should be emptied in every case of severe streptococcus infection.

Dr. Edward P. Davis, Philadelphia, in speaking of hysterectomy in cases of puerperal sepsis, stated that this operation has nothing definite to support it except in rare cases of adherent placenta. A method which yields good results, where irrigation has failed, consists in opening the abdomen and inspecting the uterus, tubes and ovaries, freeing adhesions, etc., and, if there is a collection of pus in the tubes, drainage by means of iodoform gauze carried through into the vagina, separating the organs from abnormal adhesions.

Dr. Malcolm McLean, New York City, referred to the curette as a dangerous instrument in cases of puerperal sepsis in the hands of the average general practitioner. Emptying of the uterus is an absolute necessity in some cases, especially where there is evidence of putrid absorption, with chill and sudden high temperature.

Dr. Henry D. Fry, Washington, D. C., said the practice at the Columbian Hospital, where a large number of maternity cases were observed, was first to thoroughly clean out the uterus, particularly if the patients were seen at the beginning of sepsis and it was confined to the uterine cavity. After having taken a culture, active treatment of the uterus is suspended until the result of the culture is made known. If there are retained pieces of placenta, and blood clots, accompanied with a foul odor, producing infection, the indication for cleaning out the uterus is clear. On the contrary, if the culture showed streptococcus, staphylococcus, colon bacillus, or gonococcus, the uterus was left alone. In cases of streptococcus infection he believes the use of the curette does a great deal of harm, in that it breaks down the protective zone of inflammatory tissue, which is thrown out by Nature and which causes ultimately a general systemic infection.

Dr. Herman J. Boldt, New York City, said experience has taught him, so far as the treatment of puerperal sepsis is concerned, that a bacteriologic examination of the secretions from the vagina or from the uterus, or a bacteriologic examination of the blood, furnishes no indication whatever for treatment, because there is usually a mixed infection, both streptococci and staphylococci being found in the secretions of the uterus and vagina. Such patients frequently manifest mild clinical symptoms, although operative intervention is not indicated. In all cases that come under his care, examinations of the secretions and of the blood are invariably made, and in patients who show bacteria in the blood, even a pure staphylococcus infection, the general condition of the patient does not seem to indicate the need of surgical intervention, consequently they are left alone, and recover. On the other hand, many patients show absolutely no bacteria in the blood, yet they die, so that, as the result of accumulated experience, bacteriologic examinations of the secretions and of the blood of such patients do not give a definite clue as to the indication for treatment.

Hysterectomy is of no avail in the severe cases of puerperal sepsis, as the patients die within a few days.

Dr. Seth C. Gordon, Portland, Me., thinks surgical treatment is undertaken too early in some cases of puerperal sepsis. If there are abscesses of the fallopian tubes, they should not be opened until one is quite sure that he can make a straight incision from the vaginal vault into the abscess cavity, without having any doubt as to whether pus is limited to the top of the vaginal wall. Every time an abrasion is made in the uterus or vagina with the curette or knife, he thinks a new avenue of infection is opened up, and causes, in many cases, a great deal of harm.

Dr. H. G. Wetherill, Denver, referred to the Carosso method of treatment of puerperal sepsis, saying its value was unquestionable. This method has been advocated particularly by Dr. Edward J. Ill, of Newark, N. J.

(To be continued.)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Seasickness.

According to an abstract in the *Indian Med. Record,* railway and seasickness is due to the rapidly changing focus, occasioned by the eyes closely following the apparent approach and withdrawal of objects. It was observed that by closing one eye the usual unpleasant sensation was prevented. On sea the sickness is likewise produced by watching the top of the waves, and this, together with the movement of the ship, which, according to the author, complicates very much the mechanism of focusing produces an intersection of focus curves, and thus causes seasickness. Covering one eye abolishes all these curves and relieves the nervous condition. So lying on the back serves a similar purpose because the eyes are then focused at a definite and fixed distance. Lying on the side is not so good because of the greater probability that the focus will be changed.

Calcium Chlorid in Scrofula.

Lilgois, as noted by the *New York Med. Jour.*, states that calcium chlorid is of value in the treatment of scrofula. The salt contains more than one-third of calcium, is of great benefit to the osseous system, in scrofula, which is poor in mineral matter. The following combinations are recommended:

℞.	Calcii chloridi			
	Calcii phos., āā	gr. viiss		50

M. Ft. chart. No. i. Sig.: One such after the mid-day and evening meals; or:

℞.	Calcii chloridi	ʒi	4	
	Aq. destil.	℥xii	360	
	Syr. Corsican moss	℥iss	45	

M. Sig.: To be taken in three doses during the day; or:

℞.	Calcii chloridi	ʒii-ʒiiiss	8-14	
	Aq. destil.	℥xvii	510	
	Syr. gentianæ	℥ii	60	

M. Sig.: One or two tablespoonfuls daily; or:

℞.	Calcii chloridi	gr. lxxv	5	
	Syrupi	℥xiii	390	
	Aq. menth. pip.	℥iiss	75	

M. Sig.: One tablespoonful before each meal.

The calcium should be continued for weeks, and in some cases the treatment should be prolonged for months.

Gonorrhea.

The following outline of local treatment of gonorrhea, according to the *New York Med. Jour.*, is recommended by Z. Rojos de Molina:

℞.	Zinci sulphatis	gr. iss		09
	Aquæ destil.	℥i	30	

M. Sig.: Use as an injection after each urination.

The author prefers the foregoing combination to potassium permanganate, protargol or other similar preparations. In order to subdue the pain after each micturition, the patient is directed, after each urethral injection, to inject a small amount of the following:

℞.	Zinci sulph.	gr. 3/10		018
	Cocainæ hydrochlor.	gr. iii		20
	Aquæ destil.	ʒv	20	

M. Sig.: As an injection.

Quinin Salicylate.

Moore, in the *Practitioner*, states that quinin salicylate is of great service in the treatment of rheumatism. In diphtheria, in addition to the administration of antitoxin, he recommends the following as a spray to the throat:

℞.	Resorcin	gr. x		65
	Aquæ	℥i	30	

M. Sig.: Locally as a spray.

He also gives quinin salicylate in 3 to 5 grain (.20-.30) doses, according to the age. It is of great service also in influenza, pneumonia, typhoid fever, scarlatina, erysipelas and measles. He also prescribes it in herpes zoster to relieve the pain and in chlorosis as a gastro-intestinal antiseptic and disinfectant.

Alopecia Circumscripta.

Shoemaker, in *Med. Bul.*, states that persons troubled with alopecia circumscripta generally require constitutional treatment by means of diet and proper medicine.

The following combinations are advised by him:

℞.	Syr. ferri lactati	ʒii	8	
	Ext. malti diastasic	℥vi	180	

M. Sig.: One dessertspoonful three times a day, after meals. Locally the following:

℞.	Sulphuris sublim.	ʒi	4	
	Olei eucalypti	m. x		65
	Acidi salicylici	gr. x		65
	Ung. zinci oxidi	℥i	30	

M. Ft. ung. Sig.: Rub into the affected spots well twice a day.

Acute Parotitis.

E. Grande, in *Sem. Méd.*, advocates the employment of guaiacol in the treatment of epidemic parotiditis. He applies it locally in the form of an ointment of 5 per cent. strength and repeats the application four or five times during the day, followed by a thick covering of absorbent cotton. The swelling rapidly subsides and the pain on chewing and swallowing is likewise decreased. He is of the opinion that the guaiacol exerts a local antiseptic action as well as an analgesic condition. No eczematous condition follows the application to the face as is frequently the case when applied to the scrotum.

Eczema.

In chronic eczema the same author recommends, after correcting the cause, the following outline of treatment:

℞.	Vini antimonii	ʒiii	12	
	Tinct. nucis vom.	ʒiii	12	

M. Sig.: Ten drops four times a day, gradually increased to twenty drops four times a day.

The antimony, it is believed, allays the congestion and promotes the elimination.

Externally the following is used:

℞.	Chloralis hydratis	ʒss	2	
	Camphoræ	gr. x		65
	Acidi carbol.	m. xx	1	30
	Ung. zinci oxidi	℥i	30	

M. Ft. unguentum. Sig.: Apply locally night and morning.

Hemorrhoids.

Dr. J. P. Tuttle, in *Interstate Med. Jour.*, favors the treatment of hemorrhoids by means of injection, using a moderately strong solution of carbolic acid in order to set up inflammatory induration, which will cut off a portion of the circulation to the growth and result in gradual atrophy. He claims, with the proper antiseptic precautions, that there is no danger of sepsis, abscess formation or sloughing. He recommends the following combination to produce the results above stated:

℞.	Acidi carbol.	ʒii	8
	Acidi salicylici	ʒss	2
	Sodii biboratis	ʒi	4
	Glycerini q. s. ad	℥i	30

M. Sig.: Five minims to be used as an injection into the hemorrhoid.

At the end of one week, as a rule, the remaining tumors may be similarly treated.

In the varicose type of external hemorrhoids prompt evacuation of the bowels should be obtained by administering a cold enema, after which the following ointment should be applied:

℞.	Ung. acidi tannici		
	Ung. belladonnæ		
	Ung. stramonii, āā	℥i	30

M. Sig.: Apply freely to the affected parts.

Dandruff.

The following is recommended by Merck's Report:

℞.	Resorcin	ʒi	4	
	Tannoformi	ʒi	4	
	Acidi salicylici	gr. v		30

M. Ft. chartula. Sig.: Dissolve the powder in three ounces of alcohol just before use, to which is added one ounce of water and the entire amount filtered; or:

℞.	Resorcin	ʒi	4
	Acidi borici	ʒss	2

M. et fiat chartula. Sig.: Dissolve in four ounces of water just before using.

Rachitis.

Burney Yeo, in *Clin. Ther.*, recommends, in the treatment of rickets, that too much carbohydrates should not be given to hand-fed children. The milk used should contain its full proportion of cream. He recommends cod-liver oil made into an emulsion with lime water flavored with sugar of milk, giving ten or fifteen drops at a dose. The pulp of raw meat is also of great service, giving as much as two ounces (.60) daily, varying the amount according to the age. In feeding older children milk puddings may be served made out of entire wheat flour, or sandwiches or raw meat pulp, meat juices and broths, eggs beaten up with milk, and the juice of fresh fruits may be added. The proper attention must be given to hygienic surroundings, sunshine, etc.

Rachitic children are more susceptible to pneumonia and other pulmonary complications and consequently they must be warmly clad with woolens and a woolen bandage applied to the abdomen. The clothing must fit loosely in order not to restrict the respiratory movements or the movement of the limbs.

In the anemic cases Yeo recommends the syrup of the iodid or citrate of iron and ammonia. Arsenic is also of service in these cases. If nervous complications arise the following mixture may be given as required:

℞.	Sodii bromidi	gr. xv-xx	1.-1.30	
	Chloralis hydratis	gr. viii		50
	Aq. cinnamomi	℥i	30	

M. Sig.: One teaspoonful as necessary.

The following combinations, as employed by Billroth, are recommended by the author for the constitutional treatment:

℞.	Ferri carb.		
	Ferri lactatis		
	Calcii phos.		
	Sacchari lactis, āā	ʒiss	6

M. chart. No. lx. Sig.: One powder two or three times a day; or:

℞.	Olei morrhuæ		
	Syr. calcis lactophos.		
	Liq. calcis, āā	m. xv	1

Sig.: At one dose; to be repeated three times a day—for a child of one year.

The following, containing phosphorus, are frequently prescribed:

℞.	Phosphori	gr. i		06
	Alcoholis	ʒv	20	
	Spts. menth. pip.	m. x		65
	Glycerini q. s. ad	℥ii	60	

M. Six to twelve drops three times daily after meals; or:

℞.	Phosphori	gr. 1/7		0085
	Saccharin	gr. lxxv	5	
	Ess. limonis	m. ii		12
	Ol. morrhuæ	℥iiss	105	

M. Sig.: One teaspoonful three times a day in milk.

Medicolegal.

Alteration of Unauthorized Temporary License.—In the case of Volp vs. Saylor and others, State Board of Medical Examiners, it appeared that, in 1891, the Oregon State Board of Medical Examiners issued what was intended to be a temporary license only, certifying that Heinrich Volp, having passed a satisfactory examination in medicine and surgery, was authorized to practice same until a certain date, or, in other words, for six months. The secretary testified that the board had adopted the practice of giving temporary permits so that the applicant, if unsuccessful, could still earn a livelihood, with the understanding that he again submit himself for an examination at the expiration of the period fixed in the certificate. On the trial, however, it was stipulated that the board had no power to issue a temporary permit or license. But because the board of examiners adopted an irregular and unauthorized practice, and issued a permit or license, using the form of a regular certificate, but limiting its duration, the Supreme Court of Oregon does not consider that it followed, as was argued, that such board issued and delivered an ordinary or regular license, unlimited in its scope, and therefore valid. It says that to construe such an act as the board's into absolute regularity, and the permit of six months' duration into a license regular in form and unrestricted as to the time of the operation, would be to contort an irregular and void proceeding into one of due regularity and perfect legal efficacy. The erasure of that portion of the certificate intended as a limitation could not, by any rule of ethics or practice, either in law or morals, operate to admit the holder as a regular practitioner of medicine and surgery. The fact that it was certified that he had passed a satisfactory examination could not aid him, as the certificate by its very terms limited the time the board intended he should exercise the privilege accorded, and the suggestion that the board was precluded from showing that the examination was unsatisfactory was without relevancy in the argument. He may have been entitled to a full license on such a showing, but he did not get it, and his act of changing the certificate received could not operate as an act of the board granting that which he applied for. Nor does the court accede to the contention that his license could be revoked except for unprofessional or dishonorable conduct, and that his act in changing the certificate, and thus procuring his name to be entered in the register, did not come within the meaning of such terms as declared by the act of 1895, which provided that all persons who had been regularly licensed under theretofore existing laws of the state, and had complied with the provisions thereof, should be taken and considered as licensed physicians under this act. It says that this proceeded on the assumption that he was regularly licensed, and that he was then entitled to practice by reason thereof. But he had no such license to revoke. The record he caused to be made gave him none, but it falsely showed that one had been regularly issued to him, and it was to get rid of this record that the board took action. What the board really did was to vacate a void record. Furthermore, the court holds that, where the record is admittedly fraudulent, as it was here, a court of justice will not intercede to reinstate it, even though it was vacated without notice to the party affected by the order. If the court could see that the party had been deprived of any substantial right without an opportunity to be heard, the case would be different; but he was insisting on a privilege vouchsafed to him by a license or record which he conceded to have been obtained through his own wilful and fraudulent act, and the court would not thus intercede to permit him to enjoy the fruits of his own wrong.

Compulsory Vaccination and Revaccination Law Upheld.—The Supreme Judicial Court of Massachusetts holds constitutional, in Commonwealth vs. Pear, Section 137 of Chapter 75 of the Revised Laws of that state, which provides that "The board of health of a city or town, if in its discretion it is necessary for the public health or safety, shall require and enforce the vaccination and revaccination of all of the inhabitants thereof, and shall provide them with the means of free vaccination. Whoever, being over 21 years of age and not under guardianship, refuses or neglects to comply with such requirement, shall forefeit five dollars." It says, among other things, that, so far as it is aware, all courts that have considered the subject have recognized the right of the legislature to enact laws founded on the theory that vaccination is important as a preventive of smallpox, and to impose restrictions, during an epidemic, on persons who have not been vaccinated. There are some cases in which it has been held that the statute did not go far enough to authorize the restrictions which the authorities sought to impose. But these assume that the legislature may interfere with the exercise of the ordinary rights of individuals if they are not vaccinated when smallpox is prevalent. Legislation requiring vaccination, or authorizing some local board to require it, as a prerequisite to attendance at school, has been sustained whenever called in question. Legislation requiring vaccination is mentioned by the Supreme Court of the United States as a proper exercise of the police power in Lawton vs. Steele, 152 U. S. 133-136. Statutes substantially the same as the one in this case have been sustained, after careful consideration, by the highest courts of Georgia and North Carolina. The views of the party here refusing to be vaccinated could not affect the validity of the statute, nor entitle him to be excepted from its provisions. He made some eleven offers of proof of alleged injurious or dangerous effects of vaccination, but the only competent evidence that could be presented to prove these propositions was the testimony of experts giving their opinions. It would not have been competent to introduce the medical history of individual cases. Assuming that medical experts could have been found who would have testified in support of these propositions, and that it had become the duty of the judge to instruct the jury as to whether or not the statute was constitutional, he would have been obliged to consider the evidence in connection with facts of common knowledge, which the court will always regard in passing on the constitutionality of a statute. He would have considered this testimony of experts in connection with the facts that for nearly a century most of the members of the medical profession have regarded vaccination, repeated after intervals, as a preventive of smallpox; that, while they have recognized the possibility of injury to an individual from carelessness in the performance of it, or even in a conceivable case without carelessness, they generally have considered the risk of such an injury too small to be seriously weighed as against the benefits coming from the discreet and proper use of the preventive; and that not only the medical profession and the people generally have for a long time entertained these opinions, but legislatures and courts have acted on them with general unanimity. If this party had been permitted to introduce such expert testimony as he had in support of these several propositions it could not have changed the result. It would not have justified the court in holding that the legislature had transcended its power in enacting this statute on their judgment of what the welfare of the people demanded. The theoretical possibility of an injury in an individual case as a result of its enforcement does not show that, as a whole, it is unreasonable. The application of a good law to an exceptional case may work hardship. Naturally, there would be regard to temporary conditions, if they became important, as to the time and manner of its enforcement. If a person should deem it important that vaccination should not be performed in his case, and the authorities should think otherwise, it is not in their power to vaccinate him by force, and the worst that could happen to him under the statute would be the payment of the penalty of $5. The contention that the statute works unequally, in making an exception of minors and persons under guardianship, is not well founded. It only limits the liability to a penalty for neglect of the requirement to persons who have a right to control their own conduct.

Current Medical Literature.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

May 16.

1 *The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. Keen.
2 *Cancer and Immunity. A. F. Jonas.
3 *The Relation of Cholelithiasis to Acute Pancreatitis. Joseph Wiener, Jr.
4 An Unusually Long (twenty weeks) Case of Relapsing Typhoid Fever. W. L. Stowell.

1, 5, 8, 12, 24. These articles are identical.

2. Appeared in The Journal of May 9, p. 1277.

3. **Cholelithiasis and Pancreatitis.**—The relation of these two conditions has only been lately a *matter of consideration* by the profession, and yet there are good reasons to assume its possibility. The pancreatic and common bile ducts have a common opening into the duodenum and the obstruction of the one may also be the obstruction of the other. Wiener discusses the subject and the literature, reporting a case of his own. He says from a careful study of 33 cases reported of pancreatitis associated with cholelithiasis, we are forced to the conclusion that in many there is a relationship between the two conditions. In a few cases the autopsy showed the duct of Wirsung occluded by gallstones. In one case, that of Dieckhoff, a biliary calculus had actually found its way into the pancreatic duct. Other cases point in the same way, and it is fair to assume, he holds, that in some instances where the offending calculus was not found, it had already escaped into the bowel. Fortunately the anatomic conditions are often unfavorable to occlusion of the duct of Wirsung or we would have many more cases of acute pancreatitis from gallstones. The author's case was saved, not because of an early correct diagnosis, but because of an early exploratory incision, and this, he thinks, is the crux of the whole problem in the prevention of these conditions.

Boston Medical and Surgical Journal.

May 14.

5 The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. Keen.
6 *Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. Anders.
7 *Differential Diagnosis in Diseases of the Gall Bladder and Ducts. George E. Brewer.

6. This article appeared in The Journal of May 9, p. 1284.

7. **Diseases of the Gall Bladder and Ducts.**—Brewer goes into detail as to the significance of various symptoms of gall-bladder and gall-duct diseases. He remarks in conclusion that it is well to remember the following facts derived from the best authorities:

Gallstones are rarely found in young subjects; according to Schroeder only 2.4 per cent. occur in individuals under 20 years of age. The same author states that 20 per cent. of all female, 44 per cent. of all male autopsies show the presence of calculi in the gall bladder. Ninety per cent. of the women have borne children. Gallstones have been known to escape from the biliary passages into the alimentary canal by ulcerative processes, and to produce intestinal obstruction without giving rise to pain or any other symptom until the evidences of bowel obstruction appear.

In common duct stone the calculus is found in 67 per cent. of the cases in the duodenal extremity, in 15 per cent. in the hepatic extremity, and in 18 per cent. in the middle portion of the duct (Robson).

One-half of all cases of common duct obstruction only are due to stone (Robson).

In 70 per cent. of the cases of obstruction located in the neck of the gall bladder the pain is referred to the right subscapular region, in 10 per cent. to the left subscapular region, and in 20 per cent. to the precordia, sternum, right subclavicular region or neck (Murphy).

The temperature chart in biliary infection is characterized by angularity rather than by curves, and by more or less prolonged periods of complete intermission (Murphy).

Jaundice is absent in from 80 to 90 per cent. of all operative cases of gall bladder or duct disease.

Jaundice preceded by colic is practically always due to stone; jaundice without pain is practically always due to inflammation or new growths of the ducts, or to outside pressure.

The bile in all cases of cholelithiasis should be regarded and treated as an infected secretion.

During the presence of a calculous jaundice, the sudden occurrence of acute epigastric pain, muscular rigidity, nausea, vomiting and collapse, without leucocytosis, strongly suggests acute pancreatitis occasioned by the presence of a stone in the diverticulum of Vater (Murphy).

Medical News, New York.

May 16.

8 The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. Keen.
9 *Fracture at the Base of the Skull—Neurological and Medicolegal Considerations. Pearce Bailey.
10 *Notes on Blood Pressure in Man. (To be continued.) S. S. Goldwater.
11 Some Recent Advances in Medical Therapeutics. Thomas E. Satterthwaite.

9. **Fracture at the Base of the Skull.**—The presidential address before the New York Neurological Society by Bailey reviews the symptoms and outcome of fractures of the basis cranii. He goes over the various clinical symptoms relating to the special cranial nerves, finding pupillary abnormalities one of the commonest symptoms, injury of the motor nerves of the eye frequent and that of the facial nerve most frequent of all. Conditions of paralysis, changes of reflexes, mental symptoms, etc., are also remarked on. The immediate prognosis is bad; fatal results may be looked for in more than one-half the cases. The ultimate prognosis, if not immediately mortal, is somewhat better. He thinks the mental condition in the majority of cases is restored. In some cases there is a certain amount of irritability and change of character and in a few cases permanent mental impairment. There are but a comparatively small proportion of cases in asylums with a record of fracture of the base of the skull as a cause, and he says it seems to be an entirely unimportant cause of mental disease. Fractures of the base can hardly be compared with those of the vault with direct involvement of the cortex in the latter. The physical symptoms also seem to be largely relieved, if not cured, in many cases where death does not immediately follow the injury.

10. **Blood Pressure.**—Goldwater has examined the question of blood pressure in man, finding it varying from 250 or 255 mm. as the extreme to only about 40 mm. as the lowest. He discusses at length the conditions of blood pressure under special conditions, like pregnancy, the puerperal state, as producing changes in the blood pressure and the effect of mental effort. The fact that blood pressure appears to be raised in insanity during the periods of depression is discussed, emphasizing a further study of the relations existing in healthy individuals between depressing emotions and intravascular tension.

Philadelphia Medical Journal.

May 16.

12 The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. Keen.
13 *Tumors of the Breast. Jonathan Hutchinson, Jr.
14 A Case of Femoral Thrombosis in Acute Croupous Pneumonia. D. J. Milton Miller.
15 *Tetanus. A Study of 57 Cases from the Records of the Pennsylvania Hospital. George W. Norris.
16 Gastric Carcinoma Associated with Hyperchlorhydria and with Attacks of Stupor. Norman B. Gwyn.
17 Foreign Bodies in the Bladder. Swithin Chandler.

13. **Tumors of the Breast.**—Hutchinson first notices Paget's eczema, in regard to which he remarks that the supposed parasites are, in his opinion, only the results of epithelial degeneration. As regards cysts in the breast, 80 per cent. of them are true retention cysts with milky contents, and the majority of cases require but simple tapping. In the remaining 20 per cent. the cysts are multiple and due to fibrous degeneration of the organ and, unlike retention cysts, situated usually in the periphery or circumference of the breast. He recommends an exploratory incision in case of retention cyst simulating cancer, holding that it will not do harm. Of course, the knife should be laid aside and disinfected after doing the incision. In fact, he says the surgeon should invariably make a cut into the substance of any supposed cancer. As regards excision of adenomata and cysts, he offers the following practical point, that in sewing up the incisions the stitches must be carried down to the bottom of the wound on either side, or else a bloody cavity will be very apt to form and delay healing as well as alarm the patient. The rare involution cysts, especially of the periphery, he thinks, in most cases would be better left alone. The most important point in differentiating retention cysts from carcinoma is, he holds, adhesion to the skin and its redness and dimpling in the latter. If the disease has long existed, of course there will be retraction of the nipple. Cachexia is the poorest sign of all and the least important. As regards excision of the breast, he says when you wish to obtain primary union you should not carry the incision through the middle of the axilla. Make it not through the center of the axilla, but up over the pectoralis major, right away from the area of the large sebaceous glands. If the scirrhus goes anywhere near the pectoralis major, remove the lower half of that muscle. Whether or not the pectoralis minor should be removed depends on the conditions, but access to the summit of the axilla is perhaps more free if it be excised. Avoid drainage tubes; wounds do not heal so well with them. Never tie the arm to the chest, but always bandage with it away from the side, to avoid subsequent stiffness. As regards the clearing out of the glands which are adherent to the axillary vein, he thinks it is better to dissect them out rather than to cut the vein boldly and tie it some inches higher up. For, by tying the vein, you may have persistent edema of the arm. The mortality of complete operations in his hands has not been over 3 or 4 per cent. His figures agree very well with those of Mr. Butlin at St. Bartholomew's and of Barker of the University College Hospital. The axilla should be cleared in every case, since in three out of four cases we find secondary deposits there. As regards secondary deposits of scirrhus, they are present mostly in the liver and next in the pleura and lungs and last in the pericardium, other breast, peritoneum, etc. The only frequent non-cancerous condition in patients dying from cancer of the breast is pleurisy. Oöphorectomy he considers as practically of very little value. There is no safe time limit for cure; as regards recurrence, he thinks the more experience one has the more one is encouraged to operate.

15. **Tetanus.**—Norris gives an analysis of 57 cases of tetanus from the records of the Pennsylvania Hospital, including all the cases treated there between 1874 and 1903. A curious thing is the complete absence of cases of tetanus between 1886 and 1893 which can not be accounted for. The mortality is largest in the warm months, August, September and October, and least in the colder part of the year, with a total average mortality of 85 per cent. Thus temperature seems to play a part, though the Fourth of July casualties, of course, account for a portion of the hot weather cases. The mortality is greatest in cases from wounds of the head and neck, 100 per cent. in the figures here given, and least in cases of the trunk and mixed injuries; there was only one case of injury of the trunk reported followed by tetanus. The heaviest mortality, according to age, was in the very early years and in

advanced life, nearly 100 per cent. in both, though the figures are small, only 5 of the former and 3 of the latter. The greatest number of fatalities occur in the early part of the disease. It would also appear from the table that the longer the incubation the less the mortality, though, of course, the insufficiency of statistics prevents thorough conclusions. Cases of punctured wound seem to be specially liable to produce the disease, and burns perhaps the least liable. The condition of the urine was noted in only 17 cases, but is interesting from the fact that the average specific gravity was 1.026. No definite relation could be established between the severity of the attack and the outcome of the urine analysis. The first symptoms were usually pain and stiffness in the back of the neck. Fever was present in nearly all of the cases where the temperature was recorded, and steadily increased to the end. Delirium is said to be a common symptom in alcoholic subjects and was recorded eight times. As regards treatment, the symptomatic is credited with 87 per cent. of mortality, carbolic acid treatment, according to the Bacelli method, 7 cases with 85 per cent., and antitoxin with 66 per cent. Though the latter was only employed in three cases, one of them recovered. He concludes his article by saying the following facts should be remembered in connection with the treatment of tetanus:

1. That tetanus toxin is found mainly in the nervous tissues; that, once united with these, antitoxin is powerless in its action on already affected cells.
2. That antitoxin is harmless, but deteriorates rapidly; therefore, it should be procured freshly and administered in continuous and large doses with the hope of immunizing the intact nerve cells.
3. That all cases of wounds in which there is a possibility of tetanic infection should receive prophylactic injections of antitoxin.
4. That local treatment is of great importance, hence the infected area should be excised; when this is impossible, extensive disinfection, preferably with carbolic acid, should be carried out; furthermore, that, as Behring has shown, antitoxin is of benefit locally as well as systemically.
5. That every effort should be made to maintain the nutrition of the patient, for Castronuovo has demonstrated that antitoxin is of no value in tetanic animals which have been starved.

American Medicine, Philadelphia.

May 16.

18 *The Surgical Treatment of Pruritus Vulvæ, with the Report of a Case Cured by Resection of the Genitocrural, Ilioinguinal, Inferior Pudendal and Superficial Perineal Nerves. Barton C. Hirst.
19 *Congenital Dislocation of the Hip: Report of a Bloodless Reposition, Followed by Death, with an Analysis of Twenty-three Cases in Process of Treatment. (To be continued.) H. Augustus Wilson, J. Torrance Rugh and W. M. L. Coplin.
20 Heart Showing Chronic Tuberculosis of the Pericardium, with Involvement of the Myocardium. A. G. Ellis.
21 Sarcoma of the Thumb; Report of Two Cases. William B. Trimble and George Reese Satterlee.
22 *Serious Infection Following Puncture, Laceration or Contusion of the Finger or Toe. Thomas H. Manley.
23 *The Uses and Abuses of the Urethral Sound. J. Henry Dowd.
24 The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. Keen.

18. Pruritus Vulvae.—Hirst remarks that the treatment of this condition is one of the unsolved problems. Two surgical methods are available: 1. That of exclusion of the affected part as proposed by Schroeder, and the other, resection of the nerve. Hirst discusses the advantages and disadvantages of this method, but while report of a case is stated in the title, his paper does not contain more than a brief mention of one thus relieved. In a footnote it is stated that still another case has been similarly operated on. He offers the following questions as of interest in connection with the subject:

1. Which is the better of the two surgical treatments of pruritus vulvæ, exsection of the affected skin or resection of the sensory nerve supply?
2. What is the best surgical technic for isolating and resecting the sensory nerves supplying the vulva?
3. What has been the permanent result of this operative procedure in the experience of those who have performed it or have had the opportunity of watching cases afterward?
4. If a cure of the pruritus can be expected, is there a likelihood, or has any one clinical evidence to present, of the development of kraurosis vulvæ, and possibly of an associated epithelioma?

19. Congenital Dislocation of the Hip.—The first portion of this article only is included in this issue. The authors tabulate their cases and report certain of them briefly. All thus far reported have been progressing well. They remark on the slight dependence placed by Lorenz in these cases on the x-rays, and state that their experience has confirmed the impossibility of relying much on them. One of the most difficult of all the cases was by the radiograph, apparently the most favorable.

22. Infection from Puncture of the Finger or Toe.—Manley calls attention to the large number of cases of serious phlegmonous inflammation occurring from slight punctures of the fingers or toes. These occur far more frequently in the winter and spring seasons and at the time when carbuncle, felon and erysipelas are most common. The difference from erysipelas in these cases is simply the absence of redness and metastatic invasion. Lymphangitis is always well pronounced, but the real mischief only begins when the vascular supply is compromised. Vasomotor paralysis is always an early phenomenon. Whatever the termination the pathologic feature is slow to yield. He warns against the use of narcotics in these cases and insists on the importance of local treatment. Nothing less than the free use of the scalpel will suffice. The limb must be freely exsanguinated in the areas of greatest distention. The tissues must be disinfected. Here he insists on the importance of the use of the Powell-Phelps mode of directly charging the tissues with pure carbolic acid, followed by neutralization with strong alcohol. After a surgical procedure opium is useful as well as other stimulants. When the temperature falls small doses of calomel, quinin and bitter tonics may be given. Recovery is likely to be slow, more or less functional embarrassment and stiffness remain for some time and in some cases have been permanent.

23. The Urethral Sound.—The following general rules for the use of the steel sound are given by Dowd:

1. When the urethra has been involved by inflammation, specific, or otherwise, no instrument, and especially the steel sound, should be used until the urine is clear excepting for shreds or floating particles. (Prostatic plugs.)
2. The urethra should in all cases be flushed with an antiseptic solution (formaldehyd, 1/3000) before the passage of any instrument. Following its withdrawal an astringent should be used, preferably silver nitrate 1/10000.
3. A sound should never be passed for at least three months following acute gonorrheal infection, and then only when the urine is as in No. 1.
4. When dilation of a stricture will answer, sounds are increased in size according to the tissue forming the pathologic growth and its location. True gonorrheal strictures of the deep urethra may be dilated five or six numbers at each sitting, up to 18 or 20 F.; following this, two or three numbers should be the rule.
5. In case of traumatic or gonorrheal stricture in the pendulous urethra, or when the sound is followed by marked irritation, etc., cutting gives the best result.
6. When the contraction seems not to dilate without too much force, weekly treatments being followed by considerable irritation, making the interval 10 to 14 days is generally followed by the most gratifying results.
7. Stricture can be permanently eradicated. This occurs when, after dilating the circular muscles of the canal to their fullest extent, without rupturing, no bloody string is found in the washings after four to six dilations which have varied from one to four months apart.

Medical Record, New York.

May 16.

25 *Uremia and Its Treatment. W. H. Thomson.
26 *A Study of the Rectum, with Reference to the Causative Factors of Obstipation (with Demonstrations). Louis J. Hirschman.
27 *Is the Gall Bladder as Useless as It Is Dangerous? Woods Hutchinson.
28 Ocular Symptomatology in Diagnosis. Henry B. Hollen.
29 Hydrocephalus Complicating Labor. G. W. Squires.
30 Syphilis Transmitted by Dental Forceps. S. S. Cartwright.
31 Fatal Case of Poisoning by Chlorate of Potassium. A. R. Ellis.

25. Uremia.—The peculiarities of uremia and its treatment are noticed at some length by Thomson, who remarks that there must be a variety of distinct toxemias included under this condition as commonly understood. He thinks there is one special poison which is quite common and which is generated in the kidney, and acts very much like the secretion of the suprarenal gland, producing high blood tension. For special cases he believes aconite is a vasodilator par excellence. He would recommend its systematic use as long as the pulse remains both tense and frequent, so as to lessen the strain on the heart, check the progress of vascular disease and increase defective urea excretion. In cases, however, where chronic endo-arteritis has co-existed with obliterated arteries, we can not safely utilize this drug. We should hesitate to employ it in old people, though it sometimes may be used where the pulse is quiet and there is exacerbation of chronic renal trouble. In puerperal eclampsia he says we have a remarkable illustration of such a poison being rapidly formed and giving rise to extreme high tension, but here complicated with rapid and powerful heart action. In this case the speediest and best vasodilator would be venesection, but if that be objected to, then veratrum viride should be given in large doses according to the effect on the tension of the pulse. Aconite is too slow in such cases. He does not incline much to the thyroid theory of this condition under such circumstances. In cases of organic disease of the kidney he remarks that the subject is extensive and he can only notice a few features. In scarlatinal nephritis the best prophylactic, in his opinion, not only against nephritis, but against its running a bad course, is to begin at once with a laxative dose of calomel, repeating it every night until the tongue desquamates. We are to look to the condition of the kidneys and almost universally the first danger signal is not albuminuria, but diminution in the quantity of urine and a fall in its specific gravity. When nephritis has developed and is advancing we should use the rectal douche with normal saline solution at 115 F., allowing at least two gallons of hot saline to run in and out at a time, the best instrument for this being Kemp's rectal irrigator. Certain special points in chronic interstitial nephritis are mentioned. Many people go along without indications of renal disease until uremic convulsions or other symptoms announce its existence. He believes in the great majority of such cases a new element, septic invasion of the kidneys by bacteria, especially by the colon bacillus; has entered into the case. He also remarks that he specially dreads cholera morbus in elderly persons, and should always investigate the kidneys in such cases. The prognosis in any case of chronic interstitial nephritis must always be uncertain because we can never tell how much good kidney there may be left. The diet is a matter of some importance and he would exclude any full meat diet. He remarks particularly on the difference in proteid metabolism between the day and night hours. The patients are apt to be worse in the morning, and in cases with melancholia, migraine or Graves' disease with this particular symptom he shuts off red meats. We should bear in mind these particulars when we aim to regulate a man's life who has a high tension pulse and rigid arteries. The chemistry of these night generated poisons is yet to be worked out, but he thinks they have much to do with the changes in the alimentary canal, connected with the nitrogenous elements of food, and every person with cirrhosed kidneys should be enjoined, like an asthmatic, not to eat heartily after midday. One of the best remedies for auto-infection and a prophylactic against the dangers of chronic interstitial nephritis, is life in the open air. A mild climate in winter is needed by such a patient as much as by a bronchitic or phthisical patient. Intestinal antiseptics, especially minute doses of bichlorid of mercury or sodium iodid for prolonged periods, are advised. In conclusion, he points out the differences between interstitial and parenchymatous nephritis and the different problems of treatment in the two cases. He hopes that Edebohl's surgical method will have good results. Last of all, he remarks in regard to albuminuria, that it is only a symptom, the significance of which greatly varies.

26. **Constipation.**—Hirschman's article is a description of the Houston valves with the operation for their treatment. He thinks these valves are the cause of a very large proportion of the cases of constipation, and it should be the duty of every one who has to treat any condition of the rectum to thoroughly examine and find whether these valves are hypertrophied or interfering with the normal function.

27. **The Gall Bladder.**—The question as to the value of the gall bladder to the organism is remarked on by Hutchinson. He looks at it from the point of view of its comparative anatomy and its mechanical action and the variations we find in its condition. He remarks, to sum up, that:

> The gall bladder is a nearly functionless organ, inadequate in size to act as a reservoir of any value for the bile, inadequate in muscular power, and in mechanical position, to exercise any important effect on the pressure of the bile flow, entirely absent in many species without interfering with the processes of digestion or the vital functions in any way, capable of removal from a species in which it is normally present without noticeable injury, and chiefly notable as a settling basin for the formation of gallstones, a suitable harbor for the multiplication of pathogenic bacteria, or for the assumption of pathogenic properties by nonpathogenic forms. In short, it seems a source of danger at least double any possible usefulness which it may possess.

St. Louis Medical Review.

May 9.

32 *Medical Education in the United States. Frank Billings.
33 *Cancer and Immunity. A. F. Jonas.

May 16.

34 A Case of Edematous, Intraligamentous Fibromyoma Following a Pelvic Exudate of Puerperal Origin—Operation. C. Lester Hall.

32, 33. These articles appeared in The Journal of May 9, on pp. 1271-1277 respectively.

Cincinnati Lancet-Clinic.

May 16.

35 Report of a Few Mastoid Cases [illegible]
36 Medical Sciolism vs. Medical [illegible] Horne.
37 Surgery of Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

Medical Age, Detroit, Mich.

May 10.

38 Prevention of Tuberculosis in Private Practice. J. W. McLaughlin.
39 The Criminal Insane. G. H. Moody.
40 The Canine Red Cross Corps. W. Th. Parker.

Virginia Medical Semi-Monthly, Richmond.

May 8.

41 *Nitrous Oxide-Ether Anesthesia. Charles S. White.
42 *Foreign Bodies in the Ear and Nose, with Constitutional Symptoms. R. L. Goodbred.
43 Two Cases of Osteitis of Os Calcis. W. H. Bramblett.
44 Some Observations in European Hospitals, with Special Advantages for Genito-Urinary, Skin and Rectal Study. Eaton K. McNeil.
45 Case of Ectopic Gestation, with Diagnosis and Clinical History. E. W. Peery.
46 Laceration of the Perineum Incident to Pregnancy. Charles R. Robins.
47 Prevention and Treatment of Lacerations of the Perineum. Marvin E. Nuckols.
48 Treatment of Carbolic Acid Poisoning. John R. Atwell.
49 Undetermined Abdominal Cyst, Containing Pus, Followed by Jaundice.
50 Biliary Fistula—Operation—Recovery. W. W. Rangely.
51 Rupture of Carotid Artery—Successfully Ligated. R. J. Preston.

41. **Nitrous Oxid and Ether Anesthesia.**—White advocates the preliminary use of nitrous oxid where general anesthesia is required. It is the safest anesthetic, diminishes the vomiting, hastens reaction and diminishes shock. The apparatus is bulky, which is a disadvantage, and the original cost is an item which has to be taken into account. He recommends, however, the method for more general use for the reasons given. While he does not believe it will supersede chloroform, it will be instrumental in reducing the deaths during anesthesia with which we are altogether too familiar.

42. **Foreign Bodies in the Ear.**—Goodbred calls attention to the constitutional symptoms following the introduction of foreign bodies into the ear and varying very much in different cases. In one case which he reports typhoid fever was diagnosed, but on removal of a pea which had been inserted high up in the nostril the condition was completely relieved. Another case almost like this was followed by like relief after removal of the foreign body. He does not say why the presence of a foreign body in the ear or nose should cause erysipelas in one patient, catarrh in another, fever resembling typhoid in another and in others no symptoms at all, but he calls the attention of the profession to these facts.

Medical Fortnightly, St. Louis.

May 11.

51 *The Treatment of Obesity. A. E. Taussig.
52 A Report of a Case of Unusual Recurrent Somnambulism. Wm. Shirmer Barker.
53 History of a Case of Bladder Exstrophy. T. C. Witherspoon.

51. **Obesity.**—Taussig sums up the treatment of obesity in reducing the income below the outgo. It is a matter of indifference, he says, whether the proteids, carbohydrates or fats are restricted, but the diet must be carefully selected and the number of calories estimated. From easily accessible tables, the normal weight of the individual corresponding to height, sex and race can be ascertained and the diet restricted accordingly. The restriction of water as well as a fat, rich diet represent merely technical aids and are sometimes of service and often not. Hydrotherapeutic procedures, especially with properly regulated exercise, increase considerably the combustion of body fat. Only in exceptional cases would he use thyroid preparations, and then in small doses where a rigid diet is poorly borne or where weak circulation or other conditions prevent a sufficient increase in exercise. Alcohol should be entirely excluded from the dietary of the obese. It is con-

sumed in the tissues instead of fat, which is thereby left over to accumulate in the body.

Cleveland Medical Journal.

May.

54 *Pregnancy and Labor Following Nephrectomy. J. F. Baldwin.
55 *On the Relation of Age, Sex and Conjugal Condition to Death from Typhoid Fever. George W. Moorehouse.
56 Normal Saline Solution Before, During and After Abdominal Operations. William H. Humiston.
57 Pyothorax. O. T. Maynard.
58 A Case of Pemphigus Neonatorum Associated with a General Infection by the Staphylococcus Pyogenes. J. C. Miller.

54. **Pregnancy Following Nephrectomy.**—Pregnancy after nephrectomy has been very rarely observed. Baldwin was able to find but two cases besides the one he reports himself. It would naturally be supposed, as the author remarks, that when the work of two kidneys is being performed by one a patient would suffer more from the effects of pregnancy than ordinarily. He reports two cases of his own observation, in both of which there was a successful outcome and apparently good health following, though in one case the patient died of typhoid within a year. These two cases, together with the three in Bovée's report, while not numerous enough for generalization, would seem to indicate that the prognosis of pregnancy after nephrectomy is by no means unfavorable.

55. **Typhoid Fever.**—Moorehouse has studied the mortality statistics of typhoid in Cleveland for the thirteen years from 1890 to 1903, and finds that it furnished 3 per cent. of the total deaths; 19 per cent. of all tuberculous deaths occur between the years of 20 and 25; 36 per cent. between 20 and 30, and 50 per cent. between 18.5 and 35.4 years. The proportion of deaths from typhoid fever in total mortality was 1.8 per cent. in males, which is rather in excess of the females, being 58.1 per cent. of the total typhoid mortality. In proportion to the total, the greatest number of deaths both for males and females is found in the five-year period between the age of 20 and 25 years. In this respect the mortality of typhoid fever differs essentially from that of tuberculosis, in which the highest mortality is past middle life. There is a notable decrease in the percentage of typhoid deaths in married individuals as compared with that in tuberculosis. The percentage excess of married over single mortalities in tuberculosis is four times that found in typhoid fever, from which Moorehouse concludes that tuberculosis frequently delays and prevents marriages. He finds presumably no relation between the conjugal condition and death from typhoid fever unless it be a moderate increase in liability to infection on the part of the unmarried, and this, if it exists, is thought to bear equally on the two sexes.

Providence Medical Journal.

May.

59 *Cases Illustrating the Value of Bacteriological Investigation of the Conjunctival Sac. F. T. Rogers.
60 A Glimpse of Degeneracy. George F. Keene.
61 The Bubonic Plague. William B. Cutts.
62 A Case of Antepartum Hour-glass Contraction of the Uterus. Daniel S. Latham.
63 A Case of Hemopericardium. W. E. Wilson.

59. **Conjunctival Bacteriology.**—Several cases are reported by Rogers which he thinks illustrate the danger of operations on the eye without previously ascertaining the conjunctival bacteriology. He believes that examination of the conjunctival sac is of value to determine if operative procedures can be instituted with safety, and to determine certain etiologic factors that can be of great value in the prophylaxis, and are of equal service in possible malpractice suits.

Journal of Medical Research, Boston.

May.

64 The Toxicity of Tetra-Phosphorus Tri-sulfid—A Preliminary Report. A. E. Thayer and C. G. L. Wolf.
65 A Case of Multiple Fibroma (Fibro-neuroma) of the Nerves of the Lower Extremities, with Diffuse Enlargement of the Sciatics—Complicating Sarcoma and Metastases in the Lungs. John H. Larkin.
66 A Case of Septicemic Glanders in the Human Subject. Warren Coleman and James Ewing.
67 The Formation of Hemolymph Glands from Adipose Tissue in Man. D. J. McCarthy.
68 *The Vitality of Bacteria from the Throats of Scarlet Fever Patients, with Special Study of Streptococci. George H. Weaver.
69 On the Plurality of Cytolysins in Normal Blood Sera. Simon Flexner and Hideyo Noguchi.
70 The Agglutination Affinities of Related Bacteria Parasitic in Different Hosts. Theobald Smith and Arthur L. Reagh.
71 *Actinomycosis of the Central Nervous System, with the Report of a Case Due to an Unidentified Member of the Actinomyces Group. William T. Howard, Jr.
72 An Example of a Proposed Arrangement of Specimens of a *Single Structure for Museums.* Thomas Dwight.
73 The Adrenal Gland and Its Active Principle in Their Relations to Cytolysins and Antitoxin Production. A. C. Abbott.
74 Enzymes in Tumors. B. H. Buxton.
75 A Preliminary Communication on the Etiology of Variola. William T. Councilman, George Burgess Magrath and Walter R. Brinckerhoff.

68. **The Vitality of Bacteria.**—Weaver has investigated the throats of scarlet fever patients with the idea of studying the vitality of the streptococcus. His conclusions are given as follows:

> 1. Streptococci are almost always, if not constantly, present in the throat in cases of scarlatina. In the early stages they are usually in very large numbers, becoming less numerous as the disease progresses. 2. The streptococci in the throat of scarlatina patients resist drying as long as the other bacteria usually present, and they often outlive all other forms, being alive as long as ninety days after the material is collected. 3. These streptococci remain alive for a long time in milk. 4. A small amount of sugar in nutrient media increases their value for the cultivation of streptococci. 5. Streptococci from scarlatinal anginas are not different from streptococci from other sources so far as cultural and morphologic peculiarities are concerned.

71. **Actinomycosis of the Central Nervous System.**—Howard reports a case and reviews the literature. He finds the condition rare, only 5 primary cases, including one here reported by the author, and 13 secondary cases have been published. It usually affects males in the prime of life; only two cases in females have been reported. Of the primary, 3 were reported as instances of streptothrix infection, and only one was regarded as a typical actinomycosis. Of the 13 secondary cases, 8 were regarded as typical actinomycoses, 2 as probable and 2 as cladothrix and 1 as streptothrix infection. All the primary cases with the exception of one were acute, while of the secondary the lesions were recent and usually the cause of death. In 2 each of primary and secondary cases the organisms were cultivated. No mention is made of any attempt to test the acid resisting powers. Actinomycotic granules were noticed in several and in one there were multiple nodular masses instead of abscesses, and in one other there was a firm mass the size of a hazelnut in the third ventricle and in the foramen of Monro. Primary lesions in secondary cases were usually in the lungs and bronchial glands. In one case the actinomycotic process extended directly through the skull to the meninges and brain. Howard remarks that in the present state of our knowledge all the processes caused by micro-organisms, having a mycelium of branching, interlacing and sometimes radiating threads are to be considered as actinomycosis, and that organisms with the above characteristics, whether or not they form "drusen" and clubbed hyphæ in the tissues, are to be regarded as actinomyces. A satisfactory classification is at present impossible, and it seems doubtful to him whether it is advisable to consider tuberculosis as an actinomycosis. There are two types of actinomyces, the acid-resisting, including the *Bacillus tuberculosis*, and the other, non-acid-resisting or acid-bleaching. Typical tuberculosis is always caused by the prominent member of the former, and typical actinomycosis by the prominent member of the latter group. It is better, he says, with Lehmann and Neumann, to use the term "actinomycetes" for the large number of organisms of the latter group, which were present in the case reported.

Archives of Pediatrics, New York.

May.

76 *Congenital Tumors of the Kidney, with a Report of Two Cases. Lawrence W. Strong.
77 *The Occurrence and Mortality of Typhoid Fever in Infants and Children. Henry Koplik.
78 *The Etiology of Endocarditis in Childhood. Sanford Blum.
79 A Case of Self-induced Cystitis Due to the Colon Bacillus. I. Leopold and I. Valentine Levi.
80 *Inversion in the Treatment of Acute Pulmonary Edema in Young Children, with Report of a Case. Thomas S. Southworth.
81 Congenital Hypertrophic Stenosis of the Pylorus. H. Beardsley.

76. **Congenital Tumors of the Kidney.**—From a study of these tumors, and of their literature, etc., Strong concludes as to their embryonic origin. The term carcinoma can not be applied to them as the adenomatous type is evident, and as the epithelial elements do not take origin from the developed glands of the kidney. Histologic comparison shows that these

tumors resemble the embryonic Wolffian body. There is a continuous system of tubules and their derivative cell masses throughout the tumor. The cell masses are derived from the tubules by retrograde metamorphosis. Histologic characteristics vary with the age of the part; the pelvic region is oldest, showing complete differentiation of mesenchyme and mesothelium. The metastases are youngest and show an embryonic condition where all cells are alike. Bilateral tumors are coincident and not metastatic. Metastases may occur through the lymph stream as well as through the blood stream.

77. **Typhoid in Children.**—Koplik reviews the records and statistics of typhoid in children, remarking that in the new-born it runs an atypical course, the classic symptoms being absent. Its infrequency in children under 2 years of age can be readily explained on external grounds. During the first year and in most of the second year of life infants and young children are fed with food which has been subjected to heat to a greater or less extent. Such children, it must be assumed, become infected either through the food or from contact in some uncleanly way with infectious material. The mortality is probably larger than is generally appreciated. The mortality apparently diminishes after the second year of life, though Koplik thinks this is true only in mild epidemics. As regards perforation, he has himself met with two undoubted cases, one of which was operated on, in a series of 100 cases. The heart, though undoubtedly affected, did not present the severer forms of myocarditis or endocarditis. These complications seemed to be rarer than in the adult. The mortality, of course, varies according to the severity of the epidemic, but typhoid fever in the new-born is in most cases a fatal infection. Up to two years of age it is uncertain, and statistics are not entirely reliable. From 2 to 10 years the mortality varies according to the severity of the type, sometimes high and then again very low.

78. **Endocarditis in Children.**—The instances of endocarditis and its cause in young children are reviewed from the literature by Blum, who finds that there is a condition of endocarditis that may occur in fetal life. The pathologic changes in these cases include thickening, shortening and agglutination of the valves. It may also create a predisposition to subsequent attacks in children thus affected. Acquired endocarditis is of common occurrence after the fifth year, and frequently in later youth, from rheumatism, scarlet fever, etc. Malignant endocarditis is evidently rare in children. The endocardium, like the tissues, has less power of resistance than in adult life, and especially so if congenital defects exist, which furnish a point of lessened resistance. Children are the chief sufferers from exanthemata, anad endocarditis secondary to this group of diseases is practically limited in its inception to children. About puberty the endocardium may be affected owing to the great demands made on the heart, and, unfortunately, there is a considerable number of cases of congenital endocarditis of the severe grade which never attain adult life. In fact, these severer cases other than those implicating the pulmonic orifice rarely exceed the age of 12. The predisposition to occurrence *in rheumatism, etc., is greater in childhood than in adult life.* While malignant endocarditis is rare, when it does occur it is usually associated with rheumatism. The child completely escapes from the atheromatous ravages of advanced age, but the influence which depraved systemic conditions in the mother, such as alcoholism, metallic poisoning, etc., may exert on the endocardial structures of the fetus can only be conjectured. That bacterial endocarditis may occur in the embryo he sees no reason to deny.

80. **Inversion in Pulmonary Edema of Young Children.**—Southworth reports a case where this manipulation was quickly applied in a case of sudden pulmonary edema, and was followed immediately by marked relief. After subsequent use of stimulants the child made a rapid recovery. Since a number of cases which had occurred in the same institution and were treated in the same way as regards medication, had succumbed, Southworth is inclined to think that inversion was an active factor in producing the recovery and a life-saving measure. The child was inverted and firm, steady pressure made over the lungs, with stroking pressure over the bronchi toward the head, squeezing out a little frothy fluid.

Chicago Medical Recorder.

May 15.

82 *Hydrophobia; Prevalent in Chicago. Arthur D. Bevan.
83 *The Indications for Operation in Hypertrophy of the Prostate Gland. A. J. Ochsner.
84 Laparotomy Convalescence. Robert W. Hardon.
85 *The Diagnosis of Influenza. Bertram W. Sippy.
86 Concerning the Bacteriology of Influenza. Eldridge Wynekoop.
87 The After-Treatment of Influenza. John S. Perekhan.

82. **Hydrophobia.**—Bevan reviews the symptoms of hydrophobia and calls attention to its present prevalence. Statistics show that hydrophobia, during the last eleven years, caused 91 deaths in Chicago. He is satisfied that this does not represent the actual mortality, as some cases are not recognized or not properly reported. He thinks it is a duty to call the attention of the authorities to the prevalence of hydrophobia in the city of Chicago, and that by proper dog laws radically enforced it would be possible to eradicate the disease.

83. **Prostatic Hypertrophy.**—Ochsner formulates the indications for operative treatment in prostatic hypertrophy as follows:

> 1. Perineal prostatectomy is indicated in all cases of obstruction due to hypertrophy which can not be relieved for any considerable period of time by hygienic measures and medical treatment. 2. This is especially true in old men past the period of virility because in these cases it is not necessary to preserve the seminal vesicles. 3. In younger patients more persistent efforts should be employed to obtain relief with non-operative treatment and in case of operation the seminal vesicles should be preserved. 4. In the presence of stone of the bladder complicating or resulting from the obstruction due to enlargement of the prostate gland, the latter should be removed and the stone extracted through the perineal wound. 5. The contraindications to the operation are (*a*) acute infection, (*b*) advanced nephritis with or without pyelitis, (*c*) other coexisting conditions of sufficient importance to make any major operation very unsafe. 6. If possible, thorough preparatory treatment should precede the operation. This should consist in hygienic measures, rest in bed, drinking distilled water, irrigation of the bladder and the administration of non-irritating remedies which have a tendency to render the urine sterile. 7. In case the obstruction is complete and catheterization impossible because of the obstruction or on account of the resulting hemorrhage, an immediate operation is indicated. 8. The operation should be performed before patients have advanced to this condition.

He gives a tabulated list of 22 operations with their results, including cases of suprapubic and perineal prostatectomies, castration and vasectomy. From each of these operations there were a number of cases of complete cure. Of the total number 11 were cured, 7 improved and 4 died. All the patients but 2 were over 60.

85. **Diagnosis of Influenza.**—The different forms of influenzal attacks are described by Sippy, and in conclusion he says that a positive diagnosis is only possible by determining the influenza bacillus in various secretions. Aside from the bacteriologic proof, the presence of an epidemic of the disease offers important points in diagnosis, though it is probable that sporadic influenzal infection is not rare. Certain local and general manifestations of the disease have a minor value in the diagnosis, and their importance should not be underrated, as they may lead us to suspect what can be confirmed by bacteriologic proof.

Journal of Nervous and Mental Disease, New York.

May.

88 *The Geographical Distribution of Insanity in the United States. William A. White.
89 *The Changes Found in the Central Nervous System in a Case of Rabies with Acute Mental Disturbance. Charles L. Allen.
90 Psychomotor Hallucination and Double Personality in a Case of Paranoia. William Pickett.

88. **Geographical Distribution of Insanity.**—White finds that insanity is far more prevalent along the eastern coast of the United States and also on the Pacific coast than it is in most other parts, though certain of the central states, like Ohio, Illinois and Missouri, show a large percentage. The cause of this he attributes to the increase in population and the stress of modern civilized life. No hypothesis founded solely on meteorologic or topographical conditions can explain the distribution.

89. **Rabies.**—Allen reports a case with postmortem. He finds that the lesions agree in general with those previously described, but while strongly suggestive in a case with suspicious history, taken alone without the animal inoculation they would hardly justify a positive diagnosis. From a study of the

literature of the subject and this case he concludes that neither the ganglionic changes of Van Gehuchten and Nélis, nor the rabic tubercle of Babes are absolutely characteristic of human rabies, though their presence in a suspicious case may be of considerable diagnostic value. The diagnostic importance of these changes in the dog is not yet settled, but their presence is suggestive and should always be sought for.

Bulletin of the Johns Hopkins Hospital, Baltimore.

May.

91 *On the Mechanism of Absorption of Granular Materials from the Peritoneum. W. G. MacCallum.
92 *On the Occurrence of Diastolic Murmurs without Lesions of the Aortic or Pulmonary Valves. Richard C. Cabot and Edwin A. Locke.
93 The Use of the X-ray in Surgery. E. A. Codman.
94 *Traumatic Pericarditis, Endocarditis and Myocarditis. J. Hall Pleasants.
95 Giant Cell Sarcoma of Bone. Joseph C. Bloodgood.
96 Angioneurotic Erythema and Its Surgical Treatment by Neurectomy. Joseph C. Bloodgood.

91. Absorption of Granular Materials from the Peritoneum.—From a careful study of the conditions, which he reports in full with illustrations, MacCallum concludes that we find no support whatever for the belief that there exists a connection between the peritoneum and lymphatics, nor can we uphold the idea that the peritoneal cavity forms a part of the lymphatic system. Each of these cavities is lined with cells which retain their specificity throughout and nowhere merge into one another or into the adjacent connective tissue cells. Each develops independently, and it is only later that they come into such intimate relationship that the transfer of materials from one to the other is relatively easy. The idea of the complete specificity of the endothelial cells of the lymphatics was expressed also in a previous paper by the author, and has since been confirmed—indeed, one might say proven—by the embryological investigations of Dr. Sabin. And it does not interfere with the truth of these statements, that we find that the individual cells in any of these membranes are separable by adequate forces and that the mechanical violence of the respiratory movements is sufficient to force fine granules between them.

92. Diastolic Murmurs Without Aortic or Pulmonary Lesions.—The summary and conclusions of Cabot and Locke's study are given as follows:

> Diastolic murmurs without organic valve lesions are not uncommon in connection with dilatation of the aorta, localized or diffused. One of the cases reported seems to be of this type. 2. When the pleura and pericardium are adherent owing to tuberculosis or other causes, diastolic murmurs are occasionally audible in the precordia. Such murmurs are notably affected by respiration and by position; they are probably due, in most cases, to suction or pulsion exerted by the heart on portions of lung adherent to the pericardium (cardio-respiratory murmurs). 3. In cases of intense anemia, when the red cells are reduced to or below 1,000,000 per cu. mm., one occasionally hears diastolic murmurs not to be *explained* by permanent dilatation of the aortic ring nor as "cardio-respiratory murmurs," and not due to a diastolic accentuation of a venous hum. The cause of these murmurs is obscure.

94. Cardiac Traumatism.—The part played by traumatism in the production of pericarditis, endocarditis and myocarditis is the subject of Pleasants' rather long article. He reports a case of his own of traumatic pericarditis with autopsy, and reviews other cases from the literature. Traumatic endocarditis is also considered, and a case reported following contusion of the chest without fracture, but with an immediate onset of cardiac symptoms with fever. The development of chronic mitral insufficiency and chronic traumatic endocarditis occurring at varying intervals after traumatism is apparently more frequent. A tabulated statement is given and a number of cases reported of both forms developing into valvular disease. Traumatic myocarditis is represented by four cases taken from the literature, and, as the condition seems rare, a synopsis of reported cases is given. The author concludes that it can hardly be doubted that myocarditis occasionally develops as the result of contusions of the chest Other effects of trauma on the heart include the alleged dislocation in a case of Stokes, which he thinks was hardly a correct diagnosis. Aneurism and cardiac neuroses are also mentioned.

Annals of Surgery, Philadelphia.

May.

97 *The Surgical Treatment of Facial Paralysis by Nerve Anastomosis. Harvey Cushing.
98 *On the Possibility of Operative Relief of Certain Forms of Facial Paralysis. Levi Jay Hammond.
99 Intracranial Neurectomy. Howard D. Collins.
100 *The Surgery of the Lower Ureter. Hugh H. Young.
101 *Contribution to the Subject of Perineal* Prostatectomy. Jonathan M. Wainwright.
102 *Ruptured Crucial Ligaments and Their Repair by Operation. A. W. Mayo Robson.
103 *A Case of End-to-end Anastomosis of the Popliteal Artery for Gunshot Injury. Alexander H. Ferguson.
104 The Successful Removal of a Large Enchondroma of the Chest Wall, Involving the Diaphragm. J. C. Reeve, Jr.
105 *Hepatic Syphilis from a Surgical Standpoint. Charles G. Cumston.
106 Chronic Interlobular Pancreatitis. Lewis W. Allen.
107 Tuberculosis of the Femoral, Inguinal and Iliac Lymph Nodes Secondary to Foot Wounds. Charles N. Dowd.
108 *Contribution to the Literature of Old Irreducible Dislocations of the Shoulder Joint. A. F. Jonas.
109 An Os Trigonum Detected by the *Roentgen* Rays. Henry P. Moseley.
110 An Aspirating Trocar. Edward H. Ochsner.
111 A New Osteoplastic Trephine. W. Barton Hopkins.

97. Nerve Anastomosis in Facial Paralysis.—Cushing reports and illustrates a case of nerve anastomosis of the facial to the spinal accessory similar to those reported by Ballance and Stewart, abstracted in THE JOURNAL of May 23, ¶76, p. 1474. The paralysis of the facial muscles is much less noticeable in the condition of rest since the operation, but extensive voluntary motion is only produced with simultaneous movement of the shoulders. Some independent control of special muscle groups in minor movements was regained also. Cushing remarks that the course of these impulses after an anastomosis similar to that described can only be conjectured, and it seems that there are two possible hypotheses:

> 1. That the cortical centers concerned in shoulder movements (trapezius) and rotation of the head (sterno-cleido-mastoid) may themselves in the course of time be educated by training to co-ordinate the impulses, which have been sidetracked into the motor area of the facial nerve, so as ultimately to lead to expressional movement.
>
> 2. That the cortical centers originally presiding over movements of the face continue to play a part in the co-ordinate action of these muscles, possibly influencing the higher neurones of the *N. acccssorius* through the intermediation of connecting tracts in the cortex.

98. Practically the same article appeared in THE JOURNAL of March 28, title 69, p. 874.

100. See abstract in THE JOURNAL, xxxix, p. 1409.

102. Ruptured Crucial Ligaments.—It would appear, as Robson remarks, that a force sufficient to rupture the crucial ligaments of the knee would lead to complete disorganization of the joint, but the case here reported demonstrates not only that the crucial ligaments may be ruptured without serious damage to the joint as a whole, but that their repair by operation is both feasible and hopeful as to ultimate result.

103. Anastomosis of the Popliteal Artery.—The case reported by Ferguson is of interest as being the only one so far as we know of in the literature. Anastomosis was made by the invagination method. The upper end was introduced into the lower for a distance of a quarter of an inch and held there by four retention sutures of fine silk. The free edge of the lower end was sewed around the upper with a fine continuous suture of the same material. Then the temporary gauze ligatures which had been put on were removed and the blood allowed to enter the limb. Pulsation at the ankle was restored at once and the result was in every way favorable. The patient had some difficuty in straightening his limb after operation, owing to the cicatricial contraction which was removed, occasion being taken to examine the artery at the time. Pulsation was present both above and below the seat of the anastomosis.

105. Hepatic Syphilis.—Cumston reports several cases of hepatic syphilis operated on with good results. He disagrees with some authorities who object to operative interference in these cases. He remarks that the essential thing is that the tumor be situated not too deep in the hepatic substance so as to necessitate extensive destruction of the organism and risk the patient's life. Where the gumma is covered only by a thin layer of parenchyma resection is without danger and relatively easy.

108. See abstract in THE JOURNAL of January 10, p. 118.

American Practitioner and News, Louisville, Ky.

February 15.

112 Sarcoma, with Report of a Case. A. David Willmoth.

the conditions minutely and concludes that there is no inherent reason for the difference between the mortality of the two armies. It is due, among other things, to the more careful selection of recruits. The examiners are not allowed to pass on a larger number than 150 in one day. The family antecedents of the recruits are investigated and the recruit known to have a hereditary burden is submitted to minute and prolonged observation before final acceptance. He concludes with the remark that the population is beginning to feel the beneficial effects of the three great social laws (insurance against sickness, against old age and against industrial accidents) which cost the German empire at the rate of $250,000 a day. Compulsory military service has been organized in Germany since 1814, while it is of comparatively recent date in France, 1870. For all these reasons the general standard of health and hygiene in the army is at a high level in Germany, but there is no intrinsic reason why other countries can not reach the same by appropriate hygienic and prophylactic measures.

Berliner Klin. Wochenschrift.

56 (XXIV, 14.) Diagnostic Value of Urinary Pigment. G. Klemperer.—Die Messung des Harnfarbstoffs und ihre diagnostischen Verwerthbarkeit.

57 Atony of Stomach and Its Relation to the "Splashing Sound" and to Gastrectasia. P. Cohnheim.—Ueber Atonie des Magens und ihre Beziehungen zum Plätschergeräusch und zur Gastrectasie.

58 (No. 15.) Peculiar Vascular Murmur in Lung. P. K. Pel (Amsterdam).—Ein seltenes Gefässgeräusch in der Lunge.

59 Ueber Oesophagotomie, zugleich ein Beitrag zur Behandlung der periosophagealen Phlegmone. Pels-Leusden.

60 Conservative, Non-Operative Treatment of Female Affections. A. Pinkuss.—Zur conservativen, nicht operativen Behandlung von Frauenleiden. (Commenced in No. 13.)

61 Determination and Legal Status, etc., of Hermaphrodites. T. Landau.—Ueber Hermaphroditen nebst einigen Bemerkungen über die Erkenntnis und die rechtliche Stellung dieser Individuen.

62 (No. 16.) Study of Arrow Poisons. Fifth article. L. Brieger and G. Diesselhorst.—Untersuchungen über Pfeilgifte aus Deutsch-Ostafrika.

63 Processes in Cure of Pneumonia. F. O. Huber.—Ueber einige Vorgänge bei der Heilung der Pneumonie.

64 Mesotan, an External Remedy for Rheumatism. K. Liepelt.—Mesotan, ein äusserliches Antirheumatikum.

65 Can Segregation of Urine Take Place of Catheterization of Ureters? J. Cohn.—Kann der Harnleiterkatheterismus durch Harnsegregation ersetzt worden?

66 Reform in Training, etc., of Nurses. Salzwedel.—Aerztliche Forderungen zu Reforme des Krankenpflegewesens. (Commenced in No. 14.)

67 The Lymph Glands. W. Suklennikow.—Topographische Anatomie der bronchialen und trachealen Lymphdrüsen. (Commenced in No. 14.)

Centralblatt f. Chirurgie, Leipsic.

68 (XXX, 9.) Simplification of Suture in Applying Murphy Button. Sprengel.—Zur Vereinfachung der Naht bei Anwendung des Murphyknopfes.

69 (No. 10.) *Einiges über die subkutanen Prothesen nach Gersuny. S. Kofmann.

70 (No. 11.) *Single Phases of Commencing Narcosis. C. Hofmann.—Ueber die einzelnen Phasen der Betäubung zu Beginn der Narkose.

71 (No. 12.) Chemistry of Oxygen-Chloroform Narcosis. Roth.—Zur Chemie der Sauerstoff-Chloroformnarkose.

72 (No. 13.) Plastic Operation on Face: Drawing the Skin Over While the Soft Parts of Nose Are Temporarily Turned Back. H. Schloffer.—Gesichtsplastik mit Verschiebung der Gesichtshaut unter temporärer Aufklappung der weichen Nase.

73 (No. 14.) Zur Ether-Chloroform-Mischnarkose. H. Braun.

74 (No. 15.) *Legal Status of Surgeon in Abraham's Time. Oefele (Bad Neuenahr).—Rechtliche Stellung des Chirurgen zu Abraham's Zeit (2250 V. C.).

75 (No. 16.) *Iodoform Filling for Bones. Mosetig-Moorhof (Vienna).—Die Iodoformknochenplombe.

76 *Zur operativen Behandlung der Peroneus-Lähmung. C. Deutschländer (Hamburg).

77 (No. 17.) *Fixation of Wandering Kidney in Relatively Normal Position. G. Ruggi (Modena).—Rationelle Methode zur Fixierung der Wanderniere in einer relativ normalen Position.

78 *Closure of Abdominal Wounds and Hernia by Buried Metal Plates. Z. Isnardi (Turin).—Verschliessung von Bauchwunden und Bruchpforten durch versenkte Metallplatten.

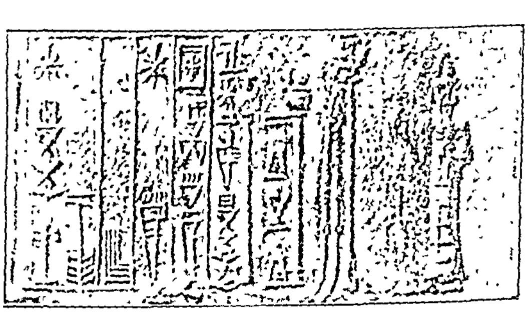
79 (No. 18.) Ueber die Rhinosklerompolypen und über eine Experimentalmethode der Diagnostik des Rhinoskleroms. A. D. Pawlawsky (Kiev).

80 Automatic Syringe for Infiltration Anesthesia. Siegfried Spiegel (Mosetig-Moorhof's clinic, Vienna).—Zur Technik der Infiltrations-Anesthesie. Eine selbstwirkende Injektionsspritze.

69. **Warning Against Paraffin Prothesis in Gynecology.**—Kofmann comments on the enthusiasm with which he introduced this method of correcting deformities into Russia and his constant success until he enlarged its sphere to include gynecologic affections. His first case of the latter was a middle-aged woman who had suffered for years from granular endometritis and mild prolapse. She was treated by abrasio mucosæ, and two weeks later, for the prolapse of the vagina, by injection of paraffin according to Gersuny's directions. After two syringefuls of 10 gm. each had been injected the patient suddenly began to cough and succumbed in twenty-four hours to embolism of the lungs. This use of paraffin Kofmann believes is not adapted to gynecology. It should never be employed in a very vascular region. Since this occurrence he has followed Eckstein's directions, using paraffin with a melting point not less than 57 to 60 C., and in a syringe protected against cooling. The tips must be short and kept warm. He adds that Gersuny's suggestion to insert the tip first and aspirate must not be forgotten, as a trace of blood shows that some vessel has been invaded.

70. **Separate Phases of Commencing Narcosis.**—Hofmann states that the benumbing effect of the first whiffs of ether is not the prerogative of ether alone but is observed likewise with chloroform and mixed narcosis. In every narcosis there is evidently a preliminary phase in which the sensation of pain is deadened while consciousness is still retained. It occurs in every case, but is more or less transient. Sudeck calls it the "Ether Rausch," and he and others have been able to perform even protracted operations with it, repeatedly bringing the patient into this stage without allowing him to pass beyond it into actual narcosis. Hofmann suggests the term "early narcosis" for it to distinguish it from the later, profound narcosis. The two are separated by the period of agitation. The phase of early narcosis may be prolonged by further administration of the anesthetic into what Kronacher calls "half narcosis," or into the profound stage. The "Ether Rausch" is, therefore, not an innovation, but merely the effort to utilize the phase which every anesthetist produces with the first whiffs of any anesthetic. Hofmann himself prefers for this early narcosis the ether drop method with or without previous administration of morphin. With a few c.c. of ether he can banish the sensation of pain in one or two minutes. The patients feel and hear everything, but suffer no pain.

74. **Legal Status of Surgeon in Abraham's Time.**—Oefele is a student of the cuneiform language of ancient Babylonia, and regrets that so little attempt has been made by the legal and medical professions to delve in the cuneiform records stored in such profusion in the British museum and elsewhere. Almost all that is known about them is what the theologians have published, but the code of 282 laws promulgated by King Hammurabi, a contemporary of Abraham, was the basis of all international and national laws then and for thousands of years thereafter, as the Roman code is accepted to-day. A copy of the entire code was found in the excavations at Susa. The laws of Moses were evidently based on it, but Moses ignored medicine and surgery in his compilation, while eleven of the paragraphs in the Hammurabi code referred to them. The standing of the surgeon before the law more than four thousand years ago is thus presented to us. The seal of the surgeon Urlugaledin has been preserved, and depicts the god Adar and next to the god the surgeon's instrument, a peculiar whip for scarifying and vessels for cupping. The word for this instrument may be translated "copper or bronze scorpion awls" and the seal shows the copper instruments tied to the end of the two whip lashes. It must have required considerable skill to manipulate the instrument properly. This copper instrument was also used to remove cataract. About 1,500



years later the cuneiform word used for the surgeon was "master of the lancet," but his instrument was described then as resembling more a pointed finger nail, and thus differs from the "scorpion awl." The code also throws light on the social position of the surgeon as it stipulates that the architect of a building or builder of a ship receives a fee for his services, but the surgeon is paid like the tailor, carpenter or potter for his work. The code establishes the remuneration for removing a cataract with the "scorpion awl" as 10 sekels when the subject is a freeman, 5 if a freedman and 2 for a slave. A sekel was about 25 cents. If the subject dies after the surgeon has applied the "scorpion awl" or the eye is lost after he has removed a cataract, if a free man, the surgeon's hands shall be cut off; if a slave, the surgeon must replace slave for slave. If the slave's eye is lost the surgeon shall pay half the price of the slave, and if a cow or ass dies after he has treated it with the "scorpion awl" he shall pay one-fourth its value. Oefele remarks that these extreme penalties may possibly be due to the fact that the ancient Babylonians believed that good and bad fortune depended on the stars, and that the surgeon, by operating on lucky days, could ensure success. The calendar expressly stated that the seventh and its multiples were unlucky days. The failure of an operation was, therefore, due either to the surgeon's lack of skill or to his neglect of the astrologic influences.

75. **Filling for Cavities in Bones.**—Mosetig-Moorhof has plugged the cavity left in the bone after removal of a lesion into sound tissue in 120 cases, and the filling was never expelled while the foreign substance was always perfectly tolerated. Every case healed without a fistula. Two patients with necrosis of the thigh bone were able to leave the hospital with a perfectly healed wound in three weeks. Radioscopy has shown that the filling is gradually substituted by neoformation of the bone exactly filling the cavity without leaving a trace of it by the end of a year, as he shows by radiograms of an instructive case. The filling is, therefore, merely temporary. It supports Nature in her horror vacui and serves as a stopgap until the bone can form again. He has found it very important to apply the filling with as careful asepsis and drying out the cavity as a dentist uses in filling a tooth. He then pours into the cavity a semisolid mixture of 60 parts iodoform in 40 parts each of spermaceti and sesame oil. The ingredients are heated together to 80 C. for fifteen minutes and then allowed to cool while the vessel is being constantly shaken in order to spread the iodoform evenly through the mass. When wanted to use it must be rewarmed to about 60 C. and well shaken. It is then slowly poured into the cavity until it is filled to the brim. After waiting a few minutes for it to harden, the flap of soft parts is sutured in place, leaving the fistula opening for drainage or a strip of rubber tissue. There is no bleeding nor secretion from a cavity thus filled. The method is applicable for cavities left from chronic osteomyelitis, necrosis, abscesses or cysts in the bones and carious foci. It is also a valuable aid in carious processes in a joint, and especially in fungous lesions in the joints. He thinks that the latter should be treated surgically at once on account of the danger of general infection from the focus. Any disturbance from resection of the bone can be obviated with this iodoform filling. He makes a practice of treating these lesions in children by removing the cartilage of the joint with the thinnest possible slice of bone, and extirpates most thoroughly the entire capsule and the fungous degenerated neighboring tissues in the soft parts. He is careful also to chisel out all isolated foci, leaving a cone-shaped cavity and filling the defect with the iodoform mixture. The results have been excellent. Growth proceeds undisturbed as the epiphysis cartilage is nowhere injured. Resections in the ankle, wrist and hip joints can be followed by applying this filling to the cavity left, although it is not properly a cavity in a bone. In case of extensive defect in the soft parts it is possible sometimes that part of the free surface of the filling is cast off. But even in this event the substitution of bone for the filling in the depths proceeds undisturbed.

76. **Operative Treatment of Paralysis of Peroneus.**—Deutschlaender's method is distinguished by the facts that the paralyzed tendons are transplanted into muscles innervated by the intact tibialis, and the transplantation is done on both sides of the foot. The necessity for symmetrical treatment has not been sufficiently regarded hitherto, he thinks. The tendons are crossed over the malleolus before being transplanted, which affords a firm support for them and also gives the tibialis a stronger hold for supination and the extensor for pronation. Another advantage is that the fibers of the tendons run obliquely to the axis of traction and are thus less liable to stretch. The stumps of the tibialis anticus muscle are sutured to the tendons at the point where they cross, which promotes dorsal flexion. It is even possible that active flexion may be regained as even much paralyzed muscles are liable to have their function restored when placed under sufficient tension. The various steps of the simple operation are illustrated.

77. **Fixation of Wandering Kidney.**—Ruggi first slits the fibrous capsule after exposing the kidney through a lumbar-costal incision. The capsule is then detached, and each half is seized with forceps and twisted with three or four turns of the forceps. Catgut is then tied around the base of the twist on each side, and the ends of the thread are drawn out through an intercostal space and tied, after the kidney has been drawn up into its normal position by traction on these threads. He has found by tests on the cadaver that these twists will bear a strain of 800 to 1,200 gm. By this technic the kidney is brought under the shelter of the ribs while its anatomic structure is not interfered with in the least.

78. **Buried Metal Plates for Abdominal Wounds and Hernias.**—Witzel and Goepel recommended in 1900 to use silver wire netting to close abdominal wounds. In 1890 Trendelenburg reported a case in which he had inserted a disc of bone for the purpose. The same year Isnardi commenced using thin metal plates and has now an experience of 50 cases of hernia thus treated, including some children. His technic differs from that of all the others as he places the plates directly on the peritoneum. Adhesions soon form and the plate becomes soldered to the peritoneum and moves with it. In a case of umbilical hernia and in one of hernia after appendicectomy, pregnancy and delivery followed without disturbances of any kind or discomfort from the buried plate. He uses a very thin round or oval perforated plate of flexible metal with a rounded, raised, smooth edge. It is wider than the hernial opening, and is inserted sideways as a button is worked into a button hole. The peritoneum is flattened by the plate and does not grow like a funnel into the relics of the hernial opening. It also prevents pressure on the cicatrix from the intestines. It is tolerated by the tissues without appreciable reaction and does not hook into them. He always concludes by suturing with wire, which practice he has been following for five years, using wire for all buried sutures and ligatures of vessels, and for laparotomies, etc. At the autopsy of a child who had been operated on with the plate for a large inguinal hernia and died from measles two years later, the plate was found solidly fastened to the peritoneum.

Therapeutische Monatshefte, Berlin.

81 (XVII, 2.) *Convenient Form of Quinin for Subcutaneous Use. Aufrecht (Magdeburg).—Eine bequemere subkutane Anwendungsweise des Chinins.
82 Camphor During Withdrawal of Morphin. A. Erlenmeyer.—Die Wirkung des Kampfers in der Abstinenzperiode der Morphium-Entziehung.
83 Zur Behandlung des Ileus. A. Schulze.
84 Ueber Pyelitis und Pyelonephritis auf Grund von Gonorrhoe. B. Marcuse.
85 Beitrag zur Behandlung der Lungen-Tuberkulose. J. Marcoginer.
86 Franzensbad Waters in Gynecologic Affections. Nenadovics.—Zur wissenschaftlichen Verordnung der Franzensbader Moorbäder bei Frauenkrankheiten.
87 The Cold Sulphur Waters of Preston, Canada, and the Thermal Sulphur Waters of Landeck. Ostrowicz.—Die kalten Schwefelwässer von Preston, etc.
88 Mineral Water Soaps in Cutaneous Affections. Bardach.—Quellsalzseifen bei Hautkrankheiten.
89 Carbolic Acid, Lysol and Lysoform. F. Nagelschmidt.—Karbolsäure, Lysol and Lysoform.
90 Plaster Bandages for Enteroptosis. W. N. Clemm.—Ueber das A. Rosesche Verfahren Eingeweidesenkungen mit Heftpflasterverbänden zu behandeln.

91 *Prophylaxis of Carcinoma. H. Mohr.—Die Prophylaxe des Karzinoms, ein Ueberblick über den augenblicklichen Stand der Frage.
92 (No. 3.) Diuretic Action of Boric Acid. O. Liebreich.—Ueber die diur. Wirkung der Borsäure.
93 *Tests of Borax, Salt, Acetic Acid, etc., on Frog Skin. T. A. Maass.—Ueber die Einwirkung von Borax, Borsäure sowie von Kochsalz, Essigsäure, Weinsäure, Zitronensäure und Natriumkarbonat auf die lebende Froschhaut.
94 *Irrigation of Biliary Passages for Diagnostic and Therapeutic Purposes. F. Kuhn (Kassel).—Durchspülung der Gallengänge zu diagn. und therap. Zwecke.
95 Improved Rib Cutter. Aufrecht.—Eine Verbesserung der Rippenresektionsscheere.
96 Comparative Study of Gaultheria Oil and Mesotan. Dreser.—Pharmakologische Bemerkungen über einige Salizylsäureester.
97 Die Erfolge des Diphtherie-Heilserums. Lichtwitz, Jr.
98 Further Successes of Cancroin in Cancer. A. Adamkiewicz (Vienna).—Bericht über weitere Erfolge des Cancroin beim Krebs des Gesichtes, der Speiseröhre, des Magens, des Mastdarmes, der Gebärmutter, der Brustdrüse und der Netzhaut. (Commenced in No. 2.)
99 *Harmlessness of Boric Acid. O. Liebreich.—Ein neuer Beweis fur die Unschädlichkeit der Borsäure.
100 Holder for Murphy Button. M. Scheuer (Richmond, Cape).—Handhabe f. M.-Knopf.
101 Improved Curved Trocar for Hydrops, etc. E. Müller (Hagen i. Westfalen).—Modifizierter gekrümmter Troikart für Hydrops, Anasarka und Empyema des Thorax.
102 (No. 4.) Das Paraffin als subkutane Prothese. Wendel. General review.
103 *Zur endovenösen Applikation der Medikamente. F. Mendel.
104 *Electric Light Treatment of Certain Affections of Air Passages. W. Freudenthal (New York).—Ueber die Anwendung des elektrischen Lichts bei einigen Erkrankungen der Luftwege.
105 Ueber die Bedeutung der Syphilis in der Pathogenese der Tabes. W. Friedländer (Berlin).
106 Death After Injection of Diphtheria Antitoxin. W. Gerlach (Poltawa).—Tod nach einer Antidiphtherie Seruminjektion.
107 Application of Camphor During Withdrawal of Morphin. J. Hofmann (Cologne).—Ueber die Anwendung des Kampfers bei Morphiumentziehung.
108 Alte Bekannte. H. Naegeli-Akerblom. Historical.
109 Ichthyol Plaster as Substitute for Ordinary Adhesive Plaster. M. Eberson (Tarnov).—Ichthyolpflaster als Ersatz für das englische Pflaster.

81. Improved Technic for Subcutaneous Injection of Quinin.—Aufrecht has long advocated quinin in the treatment of croupous pneumonia and puerperal infection. It is not a specific, but it seems to counteract the injurious action of the bacterial products in the blood and have a generally favorable influence on the course of the affection. The mortality from croupous pneumonia had ranged from 13 to 24.9 per cent. until this quinin treatment was instituted, and since then it has never been over 10, and one year as low as 5 per cent. in a total of 382 cases. The improvement in the technic which he now recommends, as already mentioned in THE JOURNAL, p. 1394, is the addition of urethane, a mild sedative, which renders the quinin much more soluble. Without it the hydrochlorate requires 34 times its volume of water, but with .25 gm. urethane to .5 gm. quinin hydrochlorate water to make only 5 gm. is all that is needed. This mixture keeps for weeks if not exposed to severe cold, and in any event redissolves on heating. He injects it in the side of the abdomen, repeating it once or twice in twenty-four hours for eight days. His experience indicates that the unpleasant by-effects of quinin are less intense than when it is given by the mouth.

91. Prophylaxis of Cancer.—Mohr urges that more attention should be paid to the precursors of carcinoma, and the transitional phenomena.

93. Tests of Borax, Etc., on Frogs.—The experimental research described shows that salt and vinegar were much more harmful for the skin of the living frog than borax or boric acid.

94. Irrigation of Biliary Passages for Diagnostic and Therapeutic Purposes.—Kuhn's experience with 59 patients enables him to cordially recommend the practice of thorough rinsing of the biliary passages into the intestine during and after operation. The flow of water sweeps out hidden calculi and by distending the walls, massages the entire route. A fluid can be used that has a dissolving tendency, Carlsbad water or eunatrol, for instance, and a direct therapeutic effect thus be induced. He believes that recovery is prompter and more complete when the gall bladder is not removed.

99. Harmlessness of Boric Acid.—Liebreich contributes several arguments in favor of the harmlessness of boric acid.

103. Intravenous Medication.—Mendel attributes to Landerer and his cinnamic acid treatment of tuberculosis, 1888, the revival of the intravenous method of medication. Mendel has himself had excellent results from intravenous administration of arsenic in form of sodium cacodylate or the preparation of arsenic known as atoxyl. The general nutrition and metabolism were improved and the effects were particularly striking in tuberculosis, anemia and in chlorotic girls. He reports actually brilliant results from it in 3 cases of exophthalmic goiter. By the end of six to eight weeks the exophthalmus, struma and palpitations had diminished to such an extent that the patients considered themselves cured. In 9 cases of tuberculosis, 3 in the early stages were cured and the others very much improved. The tuberculous process was arrested, or at least materially retarded. In a case of disfiguring chloasma of the forehead, the increased circulation in the skin under the influence of the arsenic, resulted in the rapid absorption of the pigmentation. He has found it also extremely effective in the disturbances due to the natural or artificial menopause. He treated 10 cases of tuberculosis by a combination of intravenous injection of 1/10 mg. of tuberculin and arsenic in the form of atoxyl. The general reaction to tuberculin by this route seemed to be less severe, but the local reaction was more intense. He claims that the benefits derived commend it unhesitatingly for further trials. He found the intravenous technic free from danger or pain, and reports that 20 cases of syphilis were rapidly cured by intravenous injections of the form of mercury known as sublamin, which is peculiarly mild in its by-effects, never causing stomatitis nor other troubles in his experience, while the therapeutic effect was rapid and energetic.

104. Electric Light Treatment of Upper-Air Passages.—Freudenthal reviews his favorable experience with electric light in treatment of laryngeal tuberculosis, hay fever, etc.

Therapie der Gegenwart, Berlin.

110 (No. 4.) Ueber die diagnostische Bedeutung und Behandlung functioneller Myopathien. O. Rosenbach (Berlin).
111 *Experience with Boric Acid in Obesity Cures. K. Lenz (Berlin).—Ueber Erfahrungen bei Enfettungskuren mit Borsäure.
112 After-Treatment of Pleuritic Exudates. D. Rothschild (Bad Sodern a. T.).—Zur Nachbehandlung pleur. Exsudate.
113 Zur Tuberkulosefrage. F. Klemperer. General review.
114 Study of Results of Operative Treatment of Chronic Nephritis. G. Klemperer. General review.—Heilung der chron. Nierenentzündung durch op. Behandlung?
115 Early Operation in Appendicitis. Schultz (Friedenau).—Beitrag zur Frühoperation bei App. acuta.

111. Boric Acid in Obesity Cures.—Lenz noticed unpleasant symptoms in some cases but none in others, and recommends tentative use of this means of reducing obesity on account of its convenience and efficacy in certain cases. He begins with small doses and increases to 1.5 to 2 gm. of boric acid a day, dissolved in hot water, in three portions during the day. One of his 6 patients gained 9 pounds in eleven weeks, with no restrictions as to diet.

Riforma Medica, Palermo.

116 (No. 8.) Rhythmic Jerking of the Head. M. Bucco.—Le scosse ritmiche del capo nell' ipertensione con arteriosclerosi.
117 Contributo alla patologia del diverticolo di Meckel. G. Bendandi.
118 *Functions of Hypophysis. D. Pirrone.—Contributo sperimentale allo studio della funzione dell'ipofisi. (Commenced in No. 7.)
119 Considerazioni cliniche intorno a 2 casi di spondilite tubercolare. G. Morvano.
120 (No. 9.) Case of Hysteric Fever. G. B. Ughetti.—La febbre isterica.
121 Surgery of Neoplasms in Bladder. G. Bendandi.—Contributo alla cura chirurgica delle eteroplasie dell' urocisti.
122 Case of Febrile Whooping Cough. A. Cesarani (Buenos Ayres).—Tosse convulsa febbrile. Tipo intermittente quotidiano.
123 (No. 10.) *Cardiotoxic Serum. L. Ferrannini.—Un siero cardiotossico.
124 Infantile Cardiopathy of Left Heart. L. Concetti.—Sulla etiologia delle cardiopatie infantili del cuore.
125 Surgery of Abdominal Stab Wounds. V. Martinelli.—Stato attuale della chirurgia addominale per ferite d'arma bianca.
126 *La tachicardia parossistica di natura epilettica. G. Bellisari. (Commenced in No. 9.)
127 (No. 11.) Sopra un nuevo blastomicete patogeno (Saccharomyces infiltrans Casagrandi and Santori); (Saccaromyces pseudotubercolaris Santori). Casagrandi and Santori.

128 New Facts in Regard to Nutrition. M. Ascoli.—Fatti nuovi per la dottrina della nutrizione.
129 Due casi d'angiocolite muco-purulenta. A. Campani.

118. **Experimental Study of the Functions of the Hypophysis.**—Pirrone removed the hypophysis in 6 dogs, partially resected it in others, and also studied the effects of electric stimulation in another set of animals, while in still others he studied the influence on the function of the hypophysis of severe traumatisms affecting the nervous system. He found that total ablation was invariably fatal after a stage of motor disturbances, great depression, rapid emaciation and cachexia. Other phenomena observed after ablation of the organ were due to the traumatism of the operation and should not be attributed to the loss of the hypophysis. The composition of the urine was not modified by total ablation, but the pulse was accelerated at first and later became slower than usual. Electric stimulation slows the pulse and accelerates the respiration, the reaction increasing in intensity as the stimulation is applied farther to the rear.

123. **Cardiotoxic Serum.**—Ferrannini asserts that Belfanti and Carbone were the first to call attention to the fact that an animal (horse) treated by intraperitoneal injection of rabbit blood furnished a serum extremely toxic for rabbits. From this simple beginning has grown the famous researches of Büchner, Ehrlich and others in regard to the prepared serums active against the cells from which they were originally derived. Ferrannini has been experimenting with a cardiotoxic serum produced by injecting guinea-pigs with an emulsion of frogs' hearts and rabbits with toads'. The serum thus obtained was injected into frogs and toads. In small doses it had a stimulating action while in larger ones it invariably caused at first an exaggeration of the heart action followed by a gradual depression to complete suspension. Normal serum had no such effect.

126. **Epileptic Paroxysmal Tachycardia.**—Bellisari has collected 7 cases and has himself observed 4 which demonstrate the existence of a variety of paroxysmal tachycardia that should be regarded as an epileptic equivalent. The same as the latter, the etiology may include neuropathic heredity, trauma or cortical foci. The symptoms do not differ from those of essential tachycardia and the diagnosis must be based on the history of the case, the nocturnal onset, the premonitory and consecutive symptoms and the influence of bromid medication. These attacks of tachycardia may be interpreted as conditions of arrest of the cardio-inhibiting function of the vagus from some irritation of the cortex. The prognosis need not be so guarded as is necessary in other forms of unknown cause, although repetition of the attacks may entail permanent hyposystolia possibly complicated by some anatomic lesion independent of the neurosis. His first case was a man of 34, unmarried, free from venereal and alcoholic antecedents. At 16 he had commenced to have epileptic seizures which had gradually become attenuated and ceased entirely for two or three years, when he began to be affected with nocturnal attacks of tachycardia and tachypnea, becoming more frequent until they occurred nearly every night and several times in the night. The cardiac seizures increased in intensity as the ordinary epileptic seizures became attenuated, until finally the tachycardia was accompanied by coughing, vomiting and profuse diarrhea on each recurrence. The pulse was small, soft and 130 in the morning after such an attack, the respiration 52. There was no edema, no enlargement of the liver. Digitalis was administered, but without the slightest effect; the attacks recurred with increasing intensity. After three days it was substituted by potassium bromid and sodium iodid and the patient commenced to improve at once. The bromid rapidly conquered both the tachycardia and the tachypnea rebellious to digitalis. The patient was able to resume his occupation for five years, occasionally resorting to the bromid when threatened with return of the cardiac attacks, but symptoms then developed, indicating uncompensated hypertrophy and dilatation of the heart, with moderate but continuous tachycardia. The bromid was ineffectual at this stage, and the patient soon succumbed. The second patient was a woman of 33, an epileptic from infancy, with indications of spastic infantile hemiplegia. The menstrual period was accompanied by intense asthma for two or three days, during which time the lung increased in size by an entire rib, and tachycardia for a few hours was noted. During the time when these disturbances were observed the otherwise frequent epileptic seizures were suspended. The seizures evidently had a double equivalent in the asthma and the tachycardia which in turn seemed to be connected in some way with the menstrual molimen. The third patient was a woman of 46, not an epileptic but with neuropathic heredity, intelligent, with a history of enuresis nocturna and night terrors. Sixteen years before she was first seen she was awakened one night by extreme tachypnea and tachycardia for an hour, followed by intense headache. Similar attacks recurred every four or five months and were accompanied by profuse sweating or urination. The oldest of her seven children is an epileptic and feeble minded. Glycerophosphates and bromids were prescribed and the patient has had no recurrence of the attacks during the year since. The fourth patient was a young man who exhibited hemiparesis and transient aphasia in consequence of cerebral embolism occurring in the course of acute articular rheumatism with peri- and endo-carditis and mitral insufficiency. As these symptoms improved the character became altered and a typical epileptic seizure occurred, followed by others every week or two, lasting from ten to thirty minutes. As the convulsions came on the pulse rose to 150-160, and this tachycardia continued for about an hour after the seizure. Under the bromid treatment the seizures were arrested and nothing was left but the tachycardia, preceded by the aura, and these in turn finally grew less and less. The parallel evolution of the tachycardia aand epileptic seizure demonstrated that both were evidently due to the same subcortical lesion that had produced the hemiparesis and aphasia. The existence of the organic lesion of the heart in this case can not be invoked to explain the attacks of tachycardia, given their constant coincidence with the seizures and the persistence of the aura after the seizures had been arrested, precursor of the tachycardia and the testimony to its nature.

Corr. Blatt f. Schweizer Aerzte, Basle.

130 Indications for Sitz Baths. N. Platter.—Nochmals über Sitzbäder.
131 (No. 4.) *Treatment of Fractured Patella. H. Barlöcher.—Zur Behandlung des Kniescheibenbruches.
132 Influence of Magnetic Field on Organism. P. Rodari.—Die physikalischen und physiologisch-therapeutischen Einflüsse des magnetischen Feldes auf den menschlichen Organismus.
133 (No. 5.) Case of Intoxication with Sulphuretted Hydrogen. H. Burckhardt.—Fall von Schwefelwasserstoffvergiftung.
134 Chologen Treatment of Gallstones. Greppin, Glaser et al. See also Nos. 3 and 4.
135 (No. 6.) *Danger of Mountain Railroad Trips, Especially for Elderly Persons. T. Zangger.—Ueber die Gefahr der Bahnfahrten ins Hochgebirge speziell für ältere Leute. (Commenced in No. 5.)
136 (No. 7.) Injuries of Eyes During Birth. Sidler-Huguenin.—Beitrag zur Kenntnis der Geburtsverletzungen des Auges. (Commenced in No. 6.) Seven cases.

131. **Treatment of Fractured Patella.**—The principles of Bärlocher's method are suture of the parts around the patella, never of the bone itself; suture of the capsule; dry treatment of the exposed joint, and complete closure of the wound, with active movements commenced early. In 28 cases thus treated 20 healed without disturbance. In 5 cases there were some complications elsewhere, and in 3 there were complications at the knee, phlebitis in one case with resulting ankylosis. In another the knee was injured during delirium tremens, and the third exhibited symptoms of pneumonia the day after the operation with fatty degeneration of the heart, and soon succumbed. Only 5 of the total number still use a cane. The patients remained in the hospital from 35 to 68 days, with 2 exceptions, and were able to use the knee freely when dismissed. Examined a year or more afterward there was apparently complete restitution in nearly all.

135. **Dangers of Perpendicular Mountain Trips.**—Zangger remarks that many persons grow old without being aware of it and can live their usual life in perfect health. Let some sudden strain come on their vascular system and the deterioration of age becomes abruptly evident, with apoplexy or heart

failure as the possible result. He warns that such a strain is entailed by the railroads to the tops of mountains, and emphasizes their dangers for persons over 55, even for those apparently in robust health. He relates that when the railroad on the Jungfrau was planned the promoter was required to show that such an ascent was harmless before the scheme received official sanction. He accomplished this by having 7 persons carried by 42 bearers from Zermatt up the Breithorn to a height of 4,171 meters, a difference in altitude of 2,130 meters. The medical examiners testified that the results showed that healthy men could be carried to this height without objective injury to their health, but so soon as they attempted any active movements, disagreeable and even alarming symptoms of circulatory disturbances were liable to manifest themselves. The subjects of the tests were all more or less used to the mountains. Zangger does not think it necessary to forbid mountain trips to all persons over 60, but recommends that they should test their capacity by doing some mountain climbing at the lower altitude before venturing on the ascent. They should stop over two or three days at intermediate points, and should never attempt to go above 3,000 meters. He gives directions for treatment of the disturbances that may arise and describes an instructive case in detail in which acute dilatation of the heart was the unmistakable result of a trip up the mountains. In ten hours the individual in question went from 840 to 2,590 and 1,410 meters, and again a few days later in a few hours from 1,390 to 840 meters. The heart symptoms grew constantly worse for twelve days until the picture of collapse was presented, with Cheyne-Stokes respiration and symptoms resembling those of the heart failure after diphtheria. About .02 morphin was injected, and after sleeping twenty-four hours he awoke refreshed and gradually recuperated during the following month, but the dilatation of the heart still persisted to a certain extent. The harm done by these abrupt changes of altitude may not become manifest for several days after the subject has returned home. The connection between apoplexy or heart failure occurring under these circumstances and the previous mountain trip has been hitherto overlooked.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION at the Fiftieth Annual Meeting, held at Philadelphia, Pa., September, 1902, also the Constitution, By-laws and Roll of Members. Cloth. Pp.1212. Baltimore: American Pharmaceutical Association. 1902.

FIFTY-FOURTH ANNUAL REPORT of the Board of Trustees and Superintendent of the Central Indiana Hospital for the Insane for Fiscal Year Ending Oct. 31, 1902. Paper. Pp. 62. Indianapolis: Wm. B. Burford. 1903.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION at its Twenty-sixth Annual Meeting, held in Boston, Mass., Sept. 18, 19 and 20, 1902. Paper. Pp. 222. Chicago: P. F. Pettibone & Co. 1903.

OPERATIVE SURGERY. By Herbert William Allingham, F.R.C.S., Surgeon to the Household of His Majesty the King. Cloth. Pp. 307. Price $3 net. New York: Wm. Wood & Co. 1903.

ANNUAL REPORT OF NEW YORK STATE REFORMATORY AT ELMIRA for the Fiscal Year Ending Sept. 30, 1902. Twenty-seventh Yearbook. Illustrated. Paper. 138. Summary Press. 1902.

THE OHIO STATE MEDICAL SOCIETY. Transactions of the Fifty-seventh Annual Meeting, held at Toledo, Ohio, May 28, 29, 30, 1902. Cloth. Pp. 357. Cleveland: J. B. Savage. 1902.

The Public Service.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 14, 1903:

Assistant Surgeon-General H. D. Geddings, to proceed to Elkins, W. Va., for special temporary duty.

Surgeon D. A. Carmichael, granted leave of absence for seventeen days from May 19.

Surgeon P. C. Kalloch, to assume temporary command of the service at Portland, Me., during absence, on leave, of Surgeon S. D. Brooks.

Surgeon S. D. Brooks, granted leave of absence for three days from May 19.

P. A. Surgeon J. H. Oakley, granted leave of absence for three days.

P. A. Surgeon S. B. Grubbs, granted leave of absence for one month. To rejoin station at Gulf quarantine at expiration of leave of absence.

Asst.-Surgeon C. E. Decker, granted extension of leave of absence, on account of sickness, for fourteen days from April 10.

Asst.-Surgeon T. F. Richardson, granted leave of absence for three days from May 8, under provisions of paragraph 191 of the regulations. To proceed to Gulf quarantine station for special temporary duty.

Asst.-Surgeon M. W. Glover, to proceed to Newbern, N. C., for special temporary duty.

A. A. Surgeon B. F. Duke, granted leave of absence for four days from May 18.

A. A. Surgeon B. W. Goldsborough, granted leave of absence for five days.

A. A. Surgeon G. A. Gregory, granted leave of absence for four days from May 18.

A. A. Surgeon K. S. Kennard, granted leave of absence for twenty-one days from April 25.

A. A. Surgeon J. W. Stevenson, granted leave of absence for seven days from May 11, under provisions of paragraph 191 of the regulations.

Pharmacist A. M. Roehrig, granted leave of absence for five days from May 12, under provisions of paragraph 191 of the regulations.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending May 16, 1903:

P. A. Surgeon R. K. Smith, resignation accepted, to take effect May 19, 1903.

A. A. Surgeon J. R. Dykes, U. S. N., appointed assistant surgeon April 18, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 16, 1903:

SMALLPOX—UNITED STATES.

California: Los Angeles, April 25-May 2, 2 cases; San Francisco, April 26-May 3, six cases.

Colorado: Denver, April 11-25, 53 cases.

District of Columbia: Washington, May 3-9, 1 case.

Florida: Jacksonville, May 3-9, 3 cases.

Georgia: Atlanta, April 29-May 6, 1 case.

Illinois: Belleville, May 3-9, 5 cases; Chicago, May 3-9, 14 cases, 4 deaths; Galesburg, May 3-9, 4 cases.

Indiana: Indianapolis, May 3-9, 7 cases.

Iowa: Des Moines, May 3-9, 4 cases.

Kansas: Wichita, April 26-May 9, 1 case.

Louisiana: New Orleans, May 3-9, 18 cases.

Maine: Biddeford, May 3-9, 1 case.

Maryland: Baltimore, May 3-9, 4 cases.

Massachusetts: Holyoke, May 3-9, 1 case.

Michigan: Detroit, May 3-9, 12 cases; Flint, May 3-9, 1 case; Grand Rapids, May 3-9, 4 cases; Port Huron, May 4-11, 1 case.

New Hampshire: Manchester, May 3-9, 2 cases; Nashua, May 3-9, 3 cases.

New York: Buffalo, May 3-9, 3 cases; Rochester, April 30-May 7, 1 case, 1 death.

Pennsylvania: Johnstown, May 3-9, 3 cases; McKeesport, May 3-9, 1 death; Philadelphia, May 3-9, 26 cases, 2 deaths.

South Carolina: Georgetown, May 18, 1 patient from Charleston.

Tennessee: Memphis, May 3-9, 2 cases imported.

Utah: Salt Lake City, May 3-9, 3 cases.

Wisconsin: Milwaukee, May 3-9, 2 cases.

SMALLPOX—FOREIGN.

Belgium: Brussels, April 18-25, 7 deaths; Ghent, March 28-April 25, 6 deaths.

Brazil: Rio de Janeiro, April 5-12, 3 deaths.

Canary Islands: Las Palmas, April 4-18, 44 cases.

Colombia: Bocas del Toro, April 21-28, present.

Great Britain: Birmingham, April 18-25, 7 cases; Dublin, April 18-25, 8 cases, 1 death; Liverpool, April 25, 69 cases, 6 deaths; London, April 18-25, 9 cases; Newcastle-on-Tyne, April 18-25, 2 cases; South Shields, April 18-25, 2 cases; Sunderland, April 18-25, 7 cases.

India: Bombay, April 7-14, 67 deaths; Calcutta, March 28-April 18, 7 deaths; Madras, March 28-April 3, 1 case.

Italy: Palermo, April 18-25, 1 case.

Mexico: City of Mexico, April 12-26, 21 cases, 11 deaths.

Russia: Moscow, April 4-11, 5 cases, 4 deaths; Odesa, April 11-18, 4 cases; Warsaw, April 4-11, 8 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 5-12, 29 deaths.

Colombia: Panama, April 30-May 7, 3 cases, 1 death.

Costa Rica: Limon, April 23-30, 2 cases.

Ecuador: Guayaquil, April 11-18, 2 deaths.

Mexico: Tampico, May 2-9, 2 cases, 2 deaths.

CHOLERA.

India: Calcutta, March 28-April 11, 206 deaths.

PLAGUE.

Australia: Perth, to March 23, 16 cases, 8 deaths; Rockhampton, to March 28, 2 cases; Townsville, to March 28, 3 cases.

Brazil: Rio de Janeiro, April 5-12, 2 deaths.

India: Bombay, April 7-14, 1,360 deaths; Calcutta, March 28-April 11, 1,779 deaths; Karachi, March 29-April 5, 195 cases, 161 deaths.

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Address.

DEVELOPMENT AND CARE OF CHILDREN.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON DISEASES OF CHILDREN AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT NEW ORLEANS, MAY 5-8, 1903.

JOHN C. COOK, M.D.
CHICAGO.

It is with no little temerity that I enter on my duties of opening this Section of the Fifty-fourth Annual Session of the American Medical Association, while it is a great pleasure to appear in this capacity in my native heath, as it were, for my childhood and early boyhood days were spent in the sunny south, and I feel that my early impression enables me to appreciate the high-grade sensitiveness of the southern gentleman, and when, added to this, he is one of our own cloth, I feel that I can bespeak for myself and my brethren the cordial welcome always accorded a visitor in the southern fold.

To this glorious old city that has been the scene of so many disquietudes we have come to study with you the best methods of the most important subject now before not only the medical profession but before the whole world, namely, how best to save the lives of the tender babes and develop them into sturdy manhood and womanhood, and let it be the privilege of this Section to consign to oblivion the dogmas and superstitions surrounding the treatment of diseases of children, and by our scientific accomplishments reflect the rays of the noonday sun on true preventive medicine.

It is also within the province and power of this Section of the great medical body to refute the most dangerous and far-reaching condemnation of the medical profession that has ever been made, namely, that physicians are a national detriment because they preserve the weak and thereby weaken the whole nation. But we are at the wheel and helm not only to preserve the weak but to strengthen them, and so prove ourselves, as in the past, the greatest body of human benefactors that ever has or ever will exist.

Let us see anatomically and physiologically what this specimen is we call a child. Is it true that a man is simply a grown-up child or a child an immature man? Once clear on this subject, we are better prepared to study its requirements and judge of its capabilities. Fehling gives the percentage of water in a very young fetus as 97.5. Instead of this being a permanent feature, it is merely a transitory one and diminishes steadily until after birth it is 74.7 per cent. The decrease continues gradually but more slowly until in the adult it is only 58.5 per cent. Oppenheim's researches show us that the osseous system undergoes marked changes, that the organic and inorganic elements bear inverse ratio to the age from one to twenty-five, and this fact gives us an insight into the relative period over which ossification is spread.

Thus the walls of the shafts continue to grow thicker from birth to puberty and in some instances do not attain full development before the twenty-fifth year. Take, for instance, the bones of the head and face, the upper and lower jaw begin to ossify in early life and continue to change all through childhood and youth and do not attain full development until after puberty. Again, taking as an example the layers of cartilage which act as cushions between those important parts of the skull, the basi-occipital and basi-sphenoidal bones do not allow them to unite until after the twentieth year. This condition serves to make other changes that are equally if not more important. We should keep these things in mind for their bearing on the rightful exercise of a child's functions.

The muscular system develops simultaneously with the osseous, but neither of them make a harmonious and uninterrupted development. A child is more supple than an adult, not because he has more muscle but a relatively larger proportion of muscle to tendon. As a matter of fact, there is less of the elements that make the body weight, and the percentage of water is greater and the myosin less.

A few facts of relative proportion will serve to illustrate the anatomic and physiologic difference between childhood and adult life.

The circulatory and respiratory system, the changes in the heart are noteworthy. In the fetal stage it occupies nearly the entire thoracic cavity. At birth it is still relatively larger than in the adult life. Mathematically, the new-born heart is 0.89 per cent. of the body weight, while the adult heart is only 0.52 per cent.

The rapid and irregular strides made by the lungs at different periods of development make the compensation between the lungs and heart a little uncertain during the developing period. Also the relative difference between the heart and the arterial system at different periods of growth makes an uncertain and unreliable blood pressure through youth and adolescence.

The blood elements themselves are different in childhood from adult life, rich in the so-called young-form elements, while the over-ripe is only one-half as abundant as in maturity.

The changes in the nervous system from birth to maturity afford us many examples of the difference between the child and adult. At birth the central nervous system, as well as the peripheral, is almost entirely unmedullated. Hence, we find the fibers of the spinal cord, the medulla, corpus quadrigeminous and the pons varolii mainly somatic. The motor nerves receive their attachments much earlier than the inhibitory centers are developed, hence the many objectless movements that characterize the unmeasured exercise of the young.

Thus maturity is gradual and full growth is only reached between puberty and adult life. It is our duty to guard and conserve every atom of energy through this period of unfolding and budding life, realizing that they are bundles of possibilities unsolidified, which begin at the beginning and end we know not where.

The study of biology teaches us that the higher the organism the slower the development, hence the necessity for a long period of protection and care. Take with this the many periods of stress and functional demands on the nervous system and we can realize the greater necessity for a wise and careful guardianship.

And who shall give this care and protection to the child who has been unfortunate in the selection of its parents? How much have we a right to expect from the state and how much is the state at liberty to interfere?

As citizens we have a right to expect common protection to our lives and property in return for a consideration the state exacts of us, but the state has a higher and more exalted motive in surrounding us with every care and protection, for we are its soul and body, its producer and consumer, its parent and offspring and, as every child born is a possible parent and citizen, it behooves the state to give it every protection and opportunity for a full development of all its best and highest capabilities, with a minimum facility for the development of the depraved side of humanity.

There is a wonderful significance in the fact that humanity continues its life on the earth by means of successive generations, and to conserve the nation's integrity one must protect and conserve the rising generation, and were it different how meager our advancement would be. It is only step by step of succeeding generations that the greatest heights of science, art and humanity are attained.

REGULATIONS OF CHILD LABOR.

Let us see what is being done by the state for the betterment of our successors. In speaking of the state, I refer to it in its specific rather than its general meaning, as the government of the United States has concerned itself little, if any, in the rising generation, while the states that have taken any action at all have regarded the subject from such different points of view one would think they were dealing with entirely different nations, with different environments and with entirely different objects to be attained.

Arkansas, Kansas, Georgia, Idaho, Oregon, North and South Carolina, New Mexico, Texas and Florida have not grappled with the subject at all, while about half as many states have only covered one phase of the subject.

The state of Washington does not allow small children to work in mines or females to act as public messengers. Utah protects children from working in mines only. Arizona protects her children against public exhibitions. New Hampshire has no law on child labor, but a very efficient compulsory education law. Alabama and Virginia have child labor laws pending. Fortunately in some of these states there are few manufacturing establishments.

Many of the other states have very efficient laws, others voluminous ones. Some states have legislated well on the labor question with little or no attention to compulsory education or provision for a child's time who is not allowed to work.

As early as 1874, in the Ten Hour Act, Massachusetts began to throw a safeguard around her children. In 1876 an act was passed making ten years the youngest age a child could be put to work in a factory. In 1883 the limit was raised to twelve years during school time, and in 1885 a law was passed prohibiting children working under twelve any time of the year. In 1888 the age limit was again raised to thirteen years.

These figures show the necessary changes from actual experience and have some bearing on the whole subject of the age at which children should be allowed to become wage earners. And yet, notwithstanding the fact that many of the states have enacted excellent laws on the subject of child labor, the application of them falls far short of the purpose for which they were intended. In many instances they only legalize the subject, protect the state and vicious parent, act as a sedative to public conscience and pervert their own purpose.

In all states having labor laws they take the age of the child as the standard of capability and the affidavit of the parents takes prestige over everything else in establishing this fact, which in many instances not only works physical detriment to the child but establishes in its innocent but honest mind its parents as liars; and, as the manufacturer is not required to be any better than the law, the applicant is accepted without investigation. With him it is business, not philanthropy. It requires but a slight stretch of the imagination to see this child at the juvenile court. One million seven hundred and fifty children under 15 years of age are wage earners in the United States at the present time, and this number has increased 100 per cent. in the last ten years.

Just one hundred years ago Sir Robert Peel directed the people of England's attention to the disastrous effect of child labor on the nation. He, with others, was startled to find they could no longer replenish the army from the manufacturing districts, the early factory labor had so dwarfed the rising generation.

Notwithstanding the vigor with which he and others attacked this plague, it took the best part of the following half century to consign it to oblivion. Germany, France, Austria and Russia soon followed England's example, and now "Free America" owns and controls the market in child slavery.

The result of this can not be different in this country from what it has been in others—a physically, mentally and morally weak and depraved generation, and I believe it eminently proper that a sentiment against this wholesale slaughter of childhood should emanate from a representative body of men such as this, who are devoting their lives to the care and improvement of the rising generation, and who are better prepared and more willing to cope with the subject than are any other body of citizens.

And what can we do? Elevate public sentiment and guide sentimental legislation. The state can better afford to support and educate a child from 7 to 20 years of age than it can to support paupers and *discipline* criminals from 20 to 50.

Not that I would deny any one the privilege of honest toil—far be it from me—for work is a civilizer, a developer of character and dignity, and endows the human race with an independence that nothing else will replace, and it is stated by men of keen observation and broad experience that no man in this country has ever risen to eminence, either in the medical or legal profession, who has not worked with his hands. It is not labor that makes or mars our characters, but the kind and environments during the developing period that prepares us for our future and greater tasks of life.

Factories aggregating a great number under unhygienic surroundings tend to minimize, while individual labor under good sanitary conditions tends to magnify the individual unit.

If any development occurs after a child is put to running a machine in a large factory, it is a one-sided one, making a genius or a freak, as circumstances may determine, depending on the part over-stimulated at the expense of many or all of the other faculties. Thus it is children come to have weak bodies and minds, not so much from heredity as from environment.

One may see how true this is (I quote from Oppenheim's "Development of Child") by the following report of the committee of the British Medical Association of 1883 in regard to the relative stature of boys between 11 and 22 in the population at large and at the industrial and reformatory schools. They found the tallest boys in proportion to their age in the public school. Below them came the boys in the so-called middle-class schools, and then those in the elementary schools and in the private military schools, and last of all the inmates of the industrial school, a difference of six inches existing between the first and last class.

This proportion is true at any period between the two mentioned ages. What has been found to be true of stature is also true of weight, a difference as great as twenty-five pounds existing between the first and last class; and what is true of body measure and weight is a strong indication of the mental state. Dwarfed bodies, as a rule, mean dwarfed minds and souls.

Thus, to break in on the nutrition and disturb the rhythm of development for one day means the marring of the body and harmony of a perfectly finished product. To conserve every atom of nutrition and force, protect every budding function, that we may deliver to posterity a perfect being becomes our highest and greatest aim in life.

How may we aid the state in adjusting this important matter? There are conditions which are familiar to all of us that should and must take prestige over all established state laws. As, for instance, the necessity of a child working to support its own life, to aid in the support of a helpless mother, or add to the maintenance of a young brother or sister, and I believe it is a conceded fact that there are no established rules or scales of weight, measurement, or mental development by which all children's ability to become wage earners can be established, as there are children that fulfill the requirements of the best established laws, yet by inheritance or previous environments they are physically and mentally unable to perform the duties required of the average child.

This is verified by a letter from Dr. James H. Dowie of New Holland, Georgia, who has had twenty years' experience with child labor in cotton mill life. Says the Doctor: "The children who are physically able for the duties do not succumb nearly so quick, if at all, to the factory labor. The wizen, wan and dejected ones so frequently seen in cotton mill towns are the results of over-taxation of the immature and lack of judicious application of efficient laws."

As it is not within the power of the medical profession to immediately change the present condition, we may improve it by lending our aid to the sanitary surroundings of the factories in which children are employed, see that at least 250 cubic feet of air space be allowed for each person employed from sunrise to sunset and that 400 cubic feet be allowed each person employed between the time the sun sets and rises, and that sufficient ventilation be arranged so that the entire air be changed every hour, with sufficient pure water to drink and an ample supply of sunshine, toilet facilities for both sexes employed, and to have such laws enacted as will provide for the protection, development and education of all children, with efficient administration and application of the law.

I would, therefore, recommend that each state have appointed a commission consisting of five members, at least two of whom shall be physicians, to have jurisdiction over all education and labor questions, and that said commission be appointed by the supreme judges of its state, and they in turn nominate or appoint inspectors, so that the question of child labor shall be forever removed from petty politics and vicious contract labor.

Original Articles.

THE DIAGNOSIS OF CUTANEOUS SYPHILIS.*

ISADORE DYER, Ph.B., M.D.

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NEW ORLEANS.

INTRODUCTION: ANACHRONISMS IN COMMON METHOD OF DIVIDING SYPHILIS INTO ARBITRARY GROUPS OF PRIMARY, SECONDARY AND TERTIARY.

The differential diagnosis of skin affections has always seemed a veritable *pons asinorum* to the practitioner, to whom all lesions look much alike and to whom the gross picture always seems present.

In the types of syphilis, however, exact lines of distinction characterize every set of lesions, and the experienced recognize these at once, often without even discussing the reasons why, the picture fixing the diagnosis on its own lines.

In current texts, now and latterly, so much of the traditional anachronisms have prevailed that it has seemed to the writer that some one, somewhere and somehow, should call a halt and at least utter a word against the further teaching of a dogma, which most of us feel is wrong and which as many of us would like to get away from.

With students of skin diseases in the undergraduate classes there is always most difficulty in fixing types; in syphilis this becomes additionally difficult when the very rules of diagnosis are as often excepted as found; so much so that the student is taught the opinion that syphilis is a "protean" disease, as if it were ever ready to change its type while you looked at it, when, as a matter of actual fact, no disease of the skin is as true to its types as syphilis nor more exact in its lack of confusion.

The "copper color" related as a part of the macular eruption of syphilis is a veritable mare's nest—the writer has never seen it—yet this type is a point so fixed in the minds of the writers of texts and in the field of vision of the student that on examination he always describes the roseola of syphilis as "copper colored." The induration of the chancre, the exact division of syphilis into a series of eruptions in fixed sequence, arranged according to a schedule of days, weeks, months and years, an easy rule of three, all these are beyond the experience of men who see syphilis, and these things should not be taught, for they are false teaching, and every day the men who do teach these things make excuses to themselves for doing so. Syphilis is certainly characterized more for its variants in types than for its obedience to rule. Our sole idea here is to throw the gauntlet to provoke a sort of discussion which will make more clear the definition of the types of cutaneous syphilis, according to some line of thought which is within the experience and observation, and not simply arbitrary, dogmatic, traditional or speculative.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

In teaching cutaneous syphilis, for several years the writer has made the rule to look on its definition as determined by the lesions which presented, irrespective of antecedent history, irrespective of time or of the patient's record.

DEFINITION.

We have considered syphilis as a contagious and infectious disease due to a specific *causa morbi,* at present unknown, producing, among other constitutional and local symptoms, certain definite manifestations on the surface of the body, in the skin and deeper tissues.

DIAGNOSIS OF CUTANEOUS EVIDENCES.

Chancre.—The first evidence of syphilis is the chancre, which may show any time after infection, periods of time related being from four or five days to as many as 100 more days.

Location.—Irregular. At point of inoculation. On the genitals usually, but may be at any point exposed to venereal or accidental infection. Usual points of distribution are the penis, vulva, vagina, urethra, scrotum, thighs, pubis, lips, fauces, tongue; unusual, nose, fingers, neck, eyelids, cheeks, eyebrow (arch), etc.

Arrangement.—The chancre is usually a single lesion, but there is no reason why two points of inoculation at the same time might not each present a chancre after due incubation; we may note a double chancre of the upper eyelid, a chancre on each forefinger in a medical student as coming under the writer's observation.

Description of the Lesions: *Types.*—The chancre has various types. While described as a classic, the type made the rule, the Hunterian chancre, is the exception, and, as a matter of fact, is found oftener in its full classic form in the extragenital, accidental locations than in the common venereal location.

(*a*) *Hunterian Chancre.* 1. *Shape.*—A rounded ulcer, more or less deep, with central cavity and elevated borders.

2. *Consistency.*—Base and borders are indurated, the induration resembling cartilage in its consistency and hardness. The surface of the ulcer is more or less smooth, with thin discharge, depending on the cleanliness and general condition of the patient.

3. *Size.*—The size varies up to a silver half dollar (the larger lesions are more apt to be extragenital). This lesion is classic when found on the lips, tongue or at points where the thicker skin allows the cellular infiltration and induration.

Variant Types.—Much more usual is the excoriated lesion, found usually on the genitals, smooth, superficial and shiny, bleeding easily; slight border, thin parchment-like base, rolling between the fingers. This last point, however, we wish to say is not pathognomonic of the chancre, though the texts claim so; it may occur in any lesion of long standing on the genitals, mucous membranes of the foreskin and vulva particularly.

More usual still is the excoriated lesion, with irregular base, some cellular involvement, raw and tending to break down in parts.

Both of these types are small, seldom larger than a silver dime and neither sufficiently distinct as chancres to be diagnosed in all cases.

DIFFERENTIAL DIAGNOSIS.

Epithelioma.—Gradual development, deep central ulceration, little cellular inflammation outside of lesion, tendency to crust over a discharge which is thick and dirty. Microscope. On the genitals the epithelioma is almost always verrucose or nodose.

Lupus.—Presence of tubercles which ulcerate from time to time. Microscope.

Traumatic Ulcer.—History of injury, limitation of ulcer, lack of induration. On the genitals, however, there enter for diagnosis such conditions as herpes, chancroid, epithelioma and traumatism (hair cut, abrasion, etc.).

We must remember that the fear of syphilis in most patients brings them to the consultation and that the history is most times to be discounted by that fact. Again, as Taylor has often said, you can get any kind of a history from a patient if you go about it in the right way and if you ask him questions enough.

Herpes.—With the vesicles presenting the diagnosis is simple, but the patient may have been inoculated with syphilis when the herpes was produced, that is, if it followed the sexual act.

Postherpetic Ulcer.—This presents the same clinical picture as the excoriated chancre, and it can not be differentiated from it. It has the raw surface, indurated, parchment-like base, heals slowly, is slightly painful and only differs in one particular, *quid est,* the chancre is usually single, the herpetic ulcer more often presents in two or three points along the line of nerve distribution. I have seen postherpetic ulcers last for two months.

Chancroid.—The chancroid is differentiated on the points of development after starting, multiple lesions, beginning in a pustule, often seen as it is breaking, destruction of tissue, limitation of location to genital area; but when mixed with a chancre the diagnosis of the latter is practically impossible.

Traumatism.—The hair cut, abrasion, excoriation from friction, after a few days, or enough time to determine an ulcer, may not be distinguished from a simple excoriated chancre, which each then resembles. As a matter of actual fact, these are often the sites of the chancre, either inoculated at the time of the traumatism or in subsequent exposure.

THE IRREGULARITY OF SEQUENCE IN ERUPTIONS OF SYPHILIS.

The fact that any time from a few weeks to several months or years may elapse before general cutaneous evidences of syphilis appear, and that in many instances these never show, would tend to make the usual division of the skin sequences fallacious. Logically the term secondary should apply to lesions prior to those tertiary and logically these should not be concomitant.

Yet many cases have no secondary lesions, still they present tertiary lesions; others have both at the same time; still others have the so-called secondary lesions years after tertiary lesions have shown.

SYPHILIS IS A SELF-LIMITED DISEASE.

Depending on the resistance of the individual this means the restriction of the evidences of syphilis to simple types or the surrender of the individual to greater or less degree of malignancy.

These are to be determined by the powers of elimination of the individual, evidenced by the appearance of simple inflammatory lesions, macules, papules or by the failure to eliminate, evidenced by the lesions which are deposited in the skin and deeper tissues, at times in other organs as well, such lesions as tubercles and tumors (gummata). Not infrequently the lesion is a pustule, breaking down as it is eliminated, but with a limited area of destructive process.

If we classify the general lesions of syphilis, then, into groups of inflammation and of deposit we can study each of these according to its own type and each presents its points of distinction.

Examples only are needed to present the principles of diagnosis, as this paper is meant only to plead for a method free of the confusion which awaits the average physician, not the expert, and incidentally to evidence the desire to create a general opinion that syphilis is not so difficult of diagnosis in its cutaneous manifestations.

THE IDENTITY OF EACH LESION ON ITS OWN MERITS AND ITS DIFFERENTIAL DIAGNOSIS FROM OTHER LESIONS OF SIMILAR CHARACTERISTICS.

With this end in view, we shall take examples of the inflammation group of lesions of syphilis and present each with points of diagnosis; the deposit lesions to follow, and all this independent of any arbitrary relationship to the primary, secondary or tertiary distinctions.

LESIONS OF INFLAMMATORY GROUP IN SYPHILIS.

The macule of syphilis presents the following characteristics:

Size.—Usually small, as large as little finger nail, not necessarily uniform in size.

Form.—Irregular in outline, not rounded, a splotch on the skin.

Consistency.—Level with the skin, fading on pressure, but leaving slight discoloration behind. As the lesion disappears this discoloration sometimes stays for a time.

Color.—The lesion as it first shows is rose color, pink or yellow red, raw ham color. As it fades on pressure or in the natural course of the disease it leaves a yellowish color, "dirty-lace" color, often described as "copper colored," which color is only seen in the mulatto or light negro skin.

Arrangement.—Single lesion always discrete, not confluent. No grouping, really showing as an exanthem or rash.

Distribution and Location.—Found on flexor surfaces of thighs, belly, forearms, arms, back and chest (slightly usually), forehead, sides of scalp.

Differential Diagnosis.—The absence of subjective symptoms, the subacute character of the redness, the appearance gradually over a number of days exclude measles, scarlet fever, etc.

The absence of scales, the fixed size of lesions, which does not increase, once formed, exclude pityriasis rosea, tinea versicolor and seborrheic dermatitis.

The presence of the pediculi pubis and the blue, ashy gray color of the lesions over the belly and sides of chest exclude the maculæ ceruleæ of pediculosis pubis.

The Papular Lesions.—The papular lesion of syphilis is more highly organized than the macular and presents several types:

The flat papular syphilide, the circinate and lenticular papular syphilide have a common location and distribution on the flexor surfaces especially, the chest, arms and forearms, the forehead as the usual sites.

The circinate lesion is less numerous than the other two, more discrete and is not uniform in size.

In color each of these presents the raw-ham color. Except from seborrheic dermatitis the differentiation is clear. In this disease the scales are numerous, in syphilis unusual, in both the scales are greasy, but in the syphilide the base is less apt to be affected—it is usually firm—borders elevated in the circinate form, while in seborrheic dermatitis the base of the lesion under the scales is apt to be moist or even raw.

The acuminate, or rounded papular syphilide, is discrete, widely disseminated, very general and especially on the extensor surfaces of the arms, legs, shoulders, and is found on the face, in the "frame" of the face and on the forehead.

Smallpox clusters its papules, prurigo itches constantly and psoriasis spreads its lesions peripherally.

The miliary syphilide is unique in its type, having a clustered grouping on the extensor surfaces in numerous patches of lesions of uniform size, deep seated, small (miliary) and with a dull color, often not much different from the normal skin. These lesions occasionally vesiculate and would need to be differentiated from herpes zoster, if they were not so numerous, in many patches and bilateral and symmetrical.

Condyloma.—The condylomatous papular syphilide is characterized by the location on or near the mucous membranes or tender surfaces, as over the scrotum, thigh, the foreskin, vulvæ, anal folds and between the fingers and toes. Rarely the condylomata are seen on the neck or on the face, flat, excrescent, warty at times, but marked by a more or less smooth surface, constantly wet with a discharge.

On the tongue and in the buccal cavities the condyloma is flatter and marked by a white film.

The diagnosis from ordinary warts (acuminate) and from ringworm lesions, common in some of these locations, is easy. The flabby, soft consistency, together with the sticky discharge, makes the diagnosis.

In the mouth the soreness, rawness and crescentic contour are unmistakable.

The papillary syphilide is found in little elevations, like seeds of fine grain, in the palms, on the fingers and on the soles and toes. It may be picked out, leaving a slight depression, which disappears gradually with the scaling skin. The diagnosis is clear with the few lesions, bilateral and rather uniform in size.

LESIONS OF DEPOSIT.

A word only regarding the lesions of deposit. When syphilis has passed the period in its infective process where most of the element of toxicity is removed, there remain here and there certain traces of the virus, uneliminated, left in the tissues, either permanently encapsulated or ready to slough away on the slightest provocation.

Among the tissues or organs which may be involved is the skin. Here the syphilitic deposit has certain types, always readily recognizable.

The Tubercular Syphilide.—The tubercular syphilide as a single lesion may occur generally, in more or less close distribution, on the extensor surface, bilaterally. More often the tubercle occurs grouped in masses of lesions, found in particular sites of selection: the forehead, scalp, nose, scapular region, back, hands (palms especially), thighs, knee joint, just above or below, etc.

These lesions are either small as a pea, firm and rounded in the skin, staying for months, years even, as a fading and growing mass of tubercles, "bunched" together, without ulcerating or else only here and there breaking down.

The other type of the tubercular lesion of syphilis is serpiginous, ulcerating and scarring with pigmentation in the process. The horse-shoe, kidney-shaped, crescentiform clusters of lesions are typical of this lesion.

Perhaps no lesion of syphilis goes more undiagnosed than this one. The only diseases having any resemblance at all are tuberculosis cutis and leprosy. Lupus vulgaris differs in the color of the lesions, their consistency and the arrangement irregularly in groups of rapidly breaking lesions. Moreover, the tubercles of lupus are usually found in the face, seldom elsewhere. With leprosy the tubercles are always disseminated, single, little tendency to cluster, the arrangement being usually determined by the gradual evolution of the tubercle, which may develop from a pinhead-sized lesion to a lesion as large as a marble, hence lesions of all sizes are found between these two. The color, moreover, is *sui generis,* a dusky brown red.

The Gummatous Syphilide.—The gumma of syphilis is more properly not strictly cutaneous, but has its own diagnostic points. It is usually limited, but may be general. Sites of predilection in the order named: leg, forehead, scalp, nose, shoulders, buttocks. The distribution is usually at points of weaker circulation: On the leg, along the line of the tibia or in the middle third, etc. The arrangement is by single lesions, varying in size largely according to its distribution. The lesion itself may be superficial, crusted, with slight cellular inflammation about it; it may be nodular, gradual in evolution, finally sloughing as a whole, or it may be large, flat and only slightly elevated, here and there forming punched-out, small ulcers, afterwards causing the whole gummatous mass to slough, leaving the ulcer of syphilis with its single odor and characteristic configuration.

Sarcoma, mycosis fungoides, etc., are to be differentiated. Clinically the points of diagnosis are based on the fact that sarcoma begins in a nodular mass, growing in size and that it breaks down by excoriating and gradual ulceration. Mycosis fungoides begins with a granuloma, growing warty and increasing in size until it is many times larger than the initial lesion.

SOME CONCLUSIONS.

The above outline has been done as cursorily as possible and is not intended as an exhaustive diagnosis of syphiloderms.

If each type of syphilis, then, may carry its own points of recognition and definition, capable of diagnosis on these points, why not use such a method of diagnosis which precludes the speculative line of thought which only clouds or forbids an intelligent conception of syphilis?

DISCUSSION.

Dr. Henry G. Anthony, Chicago—The author states that he has never seen a copper color in the syphilitic roseola. The copper color does not occur in every case of roseola, but it may be observed in some cases. In these cases the eruption is first of a rosy color and within a few days becomes copper colored. That fact has been greatly exaggerated and is now exaggerated by the general practitioner, but to the dermatologist it is no longer a point of importance.

The Doctor mentioned that form of infection in which chancres will appear on different parts of the body at the same time. That is what the French call chancre à distance. I have observed a case in which the patient had at one time a chancre of the tongue, a chancre of the penis and a chancre of the finger. In connection with chancre à distance there are two points to which I wish to direct your attention: First, the literature of these cases shows that the chancre virus is always deposited in these different locations at one and the same time. The patient does not get a chancre of the tongue and ten days later have the virus deposited on the finger, and then ten days later still on the penis, but it is deposited at one and the same time in all the different locations. The next point in chancre à distance is that unless there is mixed infection the gland is enlarged only in connection with one of the chancres and not with the others.

I wish to direct attention to the differential diagnosis between a chancre and a gumma. A gumma situated on the penis will many times produce a lesion which can not be distinguished from a chancre. Leloir makes this distinction; he says that a chancre is an abrasion which takes on induration, and a gumma on the penis is an induration which becomes eroded or ulcerated. Kaposi makes the statement that there are cases in which a diagnosis can not be made from an examination of the lesion and one can only make a diagnosis by considering the history of the case and considering lesions on other portions of the body. Several cases of that kind have passed under my observation. A patient gives a clear history of syphilis, has a perforation of the palate resulting from an ulcerated gumma occurring five years before. He presents himself with a lesion of the penis which at first you would diagnose as a chancre. Knowing the literature of chancre redux, chancriform syphilome of Leloir, or gumma of the penis (these terms are all synonymous), the first diagnosis which would come into your mind would be a gumma and not a second infection of syphilis. You would only make the diagnosis second infection of syphilis when driven from the diagnosis gumma by the subsequent symptoms, such as enlargement of glands at the proper time, the appearance of the roseola, neuralgic pains and temperature which mark the onset of secondary syphilis. Strange to say, no attempt has ever been made to differentiate these lesions by microscopic study of their structure.

Dr. A. H. Ohmann-Dumesnil, St. Louis—The subject is very interesting to me in regard to the nomenclature, as well as some points raised by the author. Primary, secondary and tertiary is reeled off to students, but it is not true. I have seen a case where there were two large chancres, no secondary eruption, and then catarrh of the ear developed and an eruption appeared on the eyes. I made a diagnosis of gummata of the iris, and some ophthalmologist agreed with me. So far as a herpetic chancre is concerned, that diagnoses itself. It is an interesting fact that in herpes, a syphilitic chancre developing on herpetic lesions, the herpes on pressure will produce a drop of serum and after waiting a few moments will give another drop, but the herpetic lesions will have but one drop.

I do not know what the last speaker meant by chancroid form of syphiloderma. We have a chancroid form of syphiloderma developed on the first chancre, which is the chancre redux, and any one examining the case closely will find all the characteristics of chancre. Of course, one who is experienced will make no mistake, but those who are not experienced, how will you protect them? I have seen a pseudo-chancroid which had all the characteristics of a chancre, and the patient had to wait four months to be certain that it was not syphilitic.

Dr. Isadore Dyer, New Orleans, in closing the discussion, said: I have only a word to say and that is I still wish to insist regarding the evident incorrectness in the differentiation of the types of syphilis. As a teacher of dermatology and syphilis I find it exceedingly difficult to gather any idea of syphilis from the text-books. They are misleading in their definition of exact types, which do not exist in the clinic, which I have not seen after an experience of twelve years in the practice of syphilis and dermatology. I have never seen the copper color in the early syphilide; I have only seen it follow an ulcerative lesion. I may not know what "copper color" is; if you speak of a raw-ham color, that means something to me, but I have never seen a copper color in a macular syphilide, nor has the student in my clinic seen it.

AN INTERESTING CASE OF LUPUS VULGARIS.*

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CHICAGO.

The patient who furnished the subject of this short paper was referred to me by Dr. Henry Burwash of Chicago. The history of the case is as follows:

Mrs M. W., aged 53, Canadian; married fifteen years; no children; was never pregnant; had never been robust, but enjoyed fairly good health; never had a blemish of any kind or character on the skin until the age of 48 when, three months after an operation for the removal of some polypoids from the nose, she noticed a small nodule on the left cheek. About this lesion soft papules continued to appear for three years, when ulceration commenced in the original nodule. The ulcerative process spread peripherally until two thirds of the cheek had become involved in the destructive process, as attested by marked scarring and some ulceration at the time the patient came under my observation. There were also present a nodule on the right cheek and several nodules in the neck and throat, with marked enlargement of the sublingual and submaxillary glands on both sides These enlarged glands had persisted for over four years, without any evidence or appearance of pus One brother died of consumption twenty years ago, our patient having cared for him ten months previous to his death. Two aunts, on both the mother's and father's side of the family, died of consumption The patient's mother and father, however, are still living and enjoying good health

COMMENTS ON THE CASE.

The points of special interest in this case, to my mind, are:

1. The age at which the disease developed.
2. The enlarged lymphatic glands.
3. The possible sources of infection, namely, from her tubercular brother, or at the time of the operation on her nose.
4. The differential diagnosis between lupus vulgaris and tuberculosis verrucosa cutis.

Our ideas regarding lupus vulgaris have undergone radical changes during the past quarter of a century We have passed through a heated controversy regarding the nature of the disease, and Kaposi and his followers, who contended that lupus vulgaris is not tuberculosis, are, I am convinced, ready to acknowledge that this question is no longer a live issue. Most of us were brought up in the belief that the disease invariably begins in childhood. We have lived to learn that there are exceptions to this rule. The disease may develop at any age of life. Our text-books of to-day are much less positive on this point than they were a few years ago. Elliott[1] has reported one case and cites five other cases of the disease which developed in adult life. We have become accustomed to looking on lupus vulgaris as true tuberculosis of the skin, and tuberculosis verrucosa cutis as tuberculosis by inoculation. This distinction is a convenience in teaching, but we, as specialists, must recognize the fact that it is far from being accurate. Lupus vulgaris may be produced by inoculation and it may be produced by a transformation of other forms of tuberculosis.

A few months ago a boy was presented to the Chicago Dermatological Society by Dr. Pardee with a large ulcer on the cheek, from the surface of which luxuriant granulations were growing. The members present agreed on the diagnosis of tuberculosis, but not of lupus. Of the various forms of tuberculosis which were suggested as a possible diagnosis, that of scrofuloderma was the one in which I concurred. Scrofuloderma, as Jadasohn[2] states, is a subcutaneous tubercular deposit, the skin covering which has been destroyed by ulceration, leaving a denuded surface from which fungous granulations spring up. In this case, after treatment with the x-rays, the granulations disappeared, leaving a scar. When the case was presented to the society a second time typical lupus nodules were present in the scar tissue. In my judgment it was a case of transformation of scrofuloderma into lupus vulgaris.

Fabry[3] states that he has observed this transformation of scrofuloderma into lupus vulgaris. He has also seen a tubercular gland suppurate, discharge, the fistula heal and lupus develop in the skin adjacent to the scar of the fistulous opening; where the fistula closes such cases may easily be mistaken for primary lupus vulgaris with secondary glandular enlargement.

He further states that he has seen tubercular dactylitis produce lupus as well as tuberculosis of the bones and joints. Crocker[4] says that Jadasohn reports a case in which lupus developed in a tattoo-mark, caused by wetting the India ink with tubercular saliva; also one in which a tubercular ulcer of the finger in a butcher, caused by inoculation, produced lupus at a point higher up on the extremity.

Dubois Havernith[5] says: "Inoculation by continuity of tissue is frequently observed at the mouth of fistulæ, occurring in connection with tuberculosis of the joints and bones and lymph glands which have suppurated and opened spontaneously or have been cut into by the surgeon."

In a large number of cases it will be found that the disease has originated in some wound (abrasion or scratches), or in some anterior disease, as erysipelas, eczema, a blister, an irritated pimple and the like, pointing clearly to inoculation. Lupus nodules occurring early in a vaccination scar are presumably the result of inoculation of tubercular virus present in the vaccine.

Havernith cites an instance in which a girl who slept with her sister, who was affected with lupus vulgaris of the left cheek, acquired a lupus of the right cheek, which she habitually laid against her sister's face.

These facts are cited simply to show that because the only explanation which we can offer as to the manner in which our patient contracted the disease, namely, at the time of her operation on the nose or by nursing a brother suffering from pulmonary tuberculosis, does not exclude lupus vulgaris as a diagnosis.

DIAGNOSIS.

Clinically, we concluded that our case was lupus and not tuberculosis verrucosa cutis for the following reasons:

1. The rapid development of the disease.
2. The fact that the lesions present were not the waxy-like lesions of tuberculosis verrucosa cutis.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

[1] Journal of Cutaneous and Genito Urinary Diseases, 1896, p 476.

[2] Berliner Klinische Wochenschrift, 1900.

[3] Archiv. fur Dermatologie und Syphilis, vol xxxix.

[4] Diseases of the Skin, third edition, p. 774

[5] British Journal of Dermatology, 1891, p. 360

3. Because the brown spots of beginning lupus were present.

There were no typical velvety, waxy nodules of lupus present at the time the case was under observation, but it is not uncommon to find them absent in typical cases when the patient first comes under observation. The lesions present were all such lesions as may be seen in lupus. We must endeavor to recognize and diagnose the atypical as well as the typical cases, and at the same time not lose sight of the fact that we have what may be termed border-line cases.

HISTOLOGY.

Histologically, the case showed the structure and the deep-seated location of lupus. As is well known, the lupus nodule is deep seated, while the lesion of tuberculosis verrucosa cutis is superficially located.

Stelwagon[6] shows an excellent cut of tuberculosis verrucosa cutis, taken from one of Bowen's cases, which shows the downward prolongation of the rete pegs and the superficial location of the disease, which was not the microscopic findings in our case.

By inoculation is, to my mind, the most frequent manner of contracting lupus vulgaris in adult life.

The enlargement of the lymphatic glands in connection with lupus may be due to surface infection, but, as Leloir has shown, it may also be due to the presence of tubercle bacilli in the gland. The non-inflammatory character of the enlarged glands in this case, and the length of time they had existed, rather impress me with the opinion that they were tuberculous. The lymphatic glands which were enlarged were situated on each side of the chin in the neck, indicating that absorption had occurred through the superficial facial lymphatics.

That tuberculosis of the skin is contagious in a greater or less degree there can hardly arise any doubt. In view of this fact it is well to follow the suggestions of Neumann,[7] who believes that inoculation of children and others by persons with tuberculous lesions on the skin or adjacent mucous membranes is more frequent than is generally recognized. In one place he observed four cases in one year of tuberculous lesions of the penis in children who had been circumcised. Tuberculous lesions of the upper air passages, as well as of the face and mouth, may inoculate others with tubercle bacilli by intimate contact, especially active and passive osculation. He urges scrupulous care in regard to disinfection of articles used by persons with any cutaneous tuberculous affection, scrofuloderma, etc., and regards cutaneous tuberculosis as, in fact, a more threatening source of infection than pulmonary tuberculosis, for the reason that its tuberculous nature is so often unrecognized. Dressings used by persons with tuberculous lesions of the nose, vulva, vagina or uterus, etc., scrofuloderma, miliary tuberculosis and lupus should be burned at once and attendants should frequently disinfect their hands.

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DISCUSSION.

Dr. J. H. Duncan, St. Louis—From the description of Dr. Campbell's case I could not help thinking there might be a mistake in the diagnosis. I could not make up my mind that it was a typical case of lupus vulgaris, but rather some other tubercular condition of the skin. I learn that there was a difference of opinion as to the character of the case when it was presented to the Chicago Dermatological Society.

Dr. Joseph Zeisler, Chicago—I should like to use this occasion to emphasize that dermatologists should be exact in their diagnosis of cases which fall under the generic term of tuberculosis of the skin, pathologically speaking. I long ago joined with those who look on lupus as an absolutely classical manifestation of tuberculosis of the skin. But with others, I recognize a great many other forms of tuberculosis of the skin, many of which have been mentioned in this paper and which are clinically totally different from lupus. Yet, we still see a great deal of slipshod use of the term tuberculosis of the skin, which, in the last ten or fifteen years, has become to many what we would call in German "eine Eselsbrücke" (*pons asinorum*). In other words, it is used by a great many to cover up their unfamiliarity with clinical dermatology when a distinct variety of cutaneous tuberculosis should be specified. Particularly is it necessary, it seems to me, to retain the term lupus for all those forms of tuberculosis which belong to the classical type we have all learned to recognize as lupus, a disease which begins in early life and is characterized by deep-seated, brownish nodules, which may retain their condition for many years. A diagnosis of lupus is often made not in harmony with this clinical picture. The fact Dr. Campbell has pointed out that his patient acquired her trouble at the age of 48, or something like that, would not necessarily confuse me. I have formerly believed and taught that lupus always begins before puberty, but that can not be maintained at the present time; we certainly see cases of true lupus which begin later in life. I would not question the Doctor's diagnosis on that account. I was somewhat surprised that Dr. Campbell found it necessary to differentiate his case from tuberculosis verrucosa cutis. To my mind tuberculosis verrucosa cutis is distinctly confined, as a rule, to the backs of the hands and fingers, and I could not gather from his description that there was that peculiar wart-like condition or small stalactite prolongations from the skin which I would consider necessary to make that diagnosis. In conclusion, I wish once more to urge the need of retaining the different varieties of tuberculosis of the skin under distinct clinical names rather than to make it too easy for us by grouping all of these cases under the generic term of tuberculosis.

Dr. Henry G. Anthony, Chicago—I agree with Dr. Zeisler that we must maintain very strictly our divisions, and that we must look on lupus as a distinct type to be separated from everything else. Further, I agree with him that it has heretofore been used in a loose manner very frequently.

I had an opportunity of seeing Dr. Campbell's case. It was shown before the Chicago Dermatological Society. Some of those present made a positive diagnosis of tuberculosis verrucosa cutis and disputed the diagnosis of lupus. I was interested in the histologic picture the case presented, I therefore obtained from Dr. Campbell some of the tissue and studied it with care, comparing it with a section from tuberculosis verrucosa cutis, and it corresponds with lupus in every way.

Dr. R. R. Campbell, Chicago—In answer to Dr. Duncan's criticism, I tried to clearly set forth that no claim was made that it was a typical case of lupus vulgaris, but that we should be able to recognize and diagnose atypical as well as typical cases; furthermore, that we must recognize that we have borderline cases.

Regarding the suggestion of Dr. Zeisler, I question if tuberculosis verrucosa cutis should come into consideration. It was brought up at the meeting of the Chicago Dermatological Society, and Dr. Zeisler himself at that time suggested that we must look for the cause of the infection, that while he concurred in the fact that it might be a case of lupus, and probably was, yet he would like to know where the infection came from, as it was unusual to find the disease beginning at that period of life. As to tuberculosis verrucosa cutis occurring only on the backs of the fingers, we have exceptions to that rule. I have in my practice now a case of tuberculosis verrucosa cutis of the fingers and over the patella, and several months ago I discharged as cured a case of tuberculosis verrucosa cutis of the buttocks, referred to me by Dr. J. B. Murphy of Chicago, to be treated with the *x*-ray. I think we should be cautious about laying too much stress on the classical seats of diseases.

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[6] Diseases of the Skin, p. 689.

[7] Neumann: Wiener Klin. Rundschau, vol. xvii, No. 1.

THE STUDY OF PEDIATRICS:

IS IT WORTH THE ATTENTION IT GETS, AND DOES IT GET THE ATTENTION IT DESERVES?*

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The subject of my paper consists in two questions that seem antithetic to each other, and I ask these questions in the same spirit that evoked the old and trite saying, as true as it is old, "Whatever is worth doing at all is worth doing well." If the symptomatology, etiology and treatment of the diseases of early and adult life were precisely alike there would be no need for the special study of pediatrics; but they are not alike, as they *differ often* in their pathology, yea, even in their anatomy, to such an extent that good treatment for a given disease in an adult would be bad treatment for a child. Again, some diseases that in childhood are very severe and correspondingly fatal, in adult life are extremely mild or do not appear at all or at least are rare, and the converse is exactly true of others. So the reason for the Section on Diseases of Children, in which their ailments are especially studied, is clear enough.

Now, is the study of this class of diseases worth the attention it gets? Some say "No," because it would not pay a man, except in the very largest cities, to confine his practice to children exclusively; he could not make a living at it. Now, for sake of argument we admit that, and while doing so ask another question—a habit we acquired when a small boy—namely, "What per cent. of the general practitioner's work is among the children, namely, all his patients from birth till their eighteenth year of life?" And further, "How many times has he made his entry into a good family's practice because baby was sick?" I hazard the answer that by far his largest income is derived from that source, both directly and indirectly. Directly because there are more children than adults; not so much among the 400, but, thank our luck, among the 400,000; and secondly, because children are more frequently sick than adults, even were they of equal numbers.

Another reason that might be adduced is that most parents are more solicitous about their sick children than about themselves, and that physician who can successfully cope with children's diseases can most easily find the way to the mother's heart, which is the golden key that unlocks the door that gives you entry to the whole family. Parents will risk their lives, or all they have, when their children are in danger. A mother, especially, would rush into a burning house if she thought one of her children were in it, and she would not question for a moment concerning her own danger. Likewise when a child is sick, she will send for medical aid much sooner than if she herself were ailing. She will also readily detect the skill, or want of it, of the physician called, and if she is convinced of his inability in treating her baby, she will have very little confidence in him hereafter for any other member of the family no matter how skilful he may be in other branches of the medical art. It is very foolish, and worse than silly, even criminal, for some general practitioners to assert, as one frequently hears them do, that any old lady who has raised a family of children can do more for a baby than any doctor; that children do not need any medicine, anyway that they are very difficult to treat, because, lacking intelligence in direct ratio to their youth, they can not give you any information as to their subjective symptoms, and if old enough to give information, it is likely to be faulty and misleading, and a lot more such fallacies and twaddle. I should be ashamed of my profession and doubt my own conscience were I to make such admission to anyone, and even if I felt that way it would be all the greater an incentive to study the ailments of early life all the more for feeling the want of proper information on this most interesting and valuable part of a medical man's knowledge.

If, as one of our older authors has said, "The child is father of the man," I hold it is equally true that pediatrics is the mother of general medicine.

Because a small boy has not achieved greatness or distinction, and he is only a street gamin, or perchance, even a child of unknown parents, it is not considered as much honor to treat him as it would be later on to treat this same person after he is the judge, the colonel or the general, the governor, or his excellency the president, some distinguished literateur, statesman, prince or potentate. It is no sign, nor does it logically follow, as the day follows night, that the study of pediatrics is less dignified, less distinguished, than that of general medicine.

The man who recently gave an example of his bloodless reduction of congenital hip dislocation is a pediatrist from the nature of his work and its limitations, and yet he received more notoriety from both the professional and lay press than any dozen or more of the other members of the medical specialties, either at home or abroad. He has shown us that there is an honorable and useful field open in this department, and I desire to remark, there is yet much unexplored territory that awaits others who will take the pains to investigate, and their labors will not go unrewarded, neither financially nor otherwise.

As I do not intend to go at this proposition polemically, I will say in the affirmative, that the study of pediatrics is worth all the attention it gets and far more.

This assertion almost covers the answer to the second question, "*Does it get the attention it deserves?*" So I will prefix my answer to my remarks on this part and say at once that it does not get the attention it deserves. In the first place, it does not get its proper attention in the medical college where it is claimed to be taught, but is not—or at least if so, only exceptionally.

In very few medical schools, either abroad or in our own country, do they have a special chair for teaching diseases of children, but it is usually taught by an associate or adjunct professor to the chair of internal medicine, and probably one lecture a week or every two weeks is devoted to it, and what is worse, not always is this chair filled by some distinguished man, but by one who is cutting his eye teeth preparatory to masticating the bigger chunks to be bitten off later. Frequently the student is given to understand, if not directly told, that the subject is of minor importance, and he would better give his special attention to pathology, bacteriology, obstetrics and gynecology, where his especial attention is directed to tubes, ovaries, hysterectomies, appendices and other glittering promises of surgical paraphernalia, fame, wealth, success, where, like military heroes, he can "wade through slaughter to a throne."

Of course, these are all necessary, but of how much use are they to the average tyro in practice? That comes later, after the baby has had a convulsion, or midnight croup, and thus introduced him to the favorable notice of the family.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

When I studied pediatrics I was taught it by my professor of chemistry, toxicology, materia medica, therapeutics, hygiene, state medicine, diseases of women and children. See? All one man, but he was versatile! Yet I am still at a loss, that of the many subjects he was professor of which of these he taught me most, but I am sure it was not pediatrics. If I know anything about that I learned it later. I learned much of it right here in this Section, from the papers I hear read and discussed (and which I reread later in The Journal), which were written by many of the distinguished authors who think it not beneath them to cast their lot with us. Now, while I am talking about its teaching in our medical colleges, I wish to assert my opinion, that aside from having special books on diseases of children, it were well to learn this matter by comparison. For instance, when a given disease is discussed in a treatise on internal medicine, its etiology, clinical history, pathology, anatomy, diagnosis, prognosis and treatment, it would be well to remark of its behavior in childhood, where it is similar or dissimilar from its manifestation in adults, and by these means much good were done to rivet the attention of the student to this important branch of medicine. Some authors do this in part, but most of them do it in a half-hearted way. I am sure if it were done as I fancy it should be done it would save much separate study, much book buying and reading over and over again in ponderous tomes and voluminous cyclopedias, which often reminds one of threshing over an old straw stack for the sake of a few grains of good wheat one might find. It were far more profitable to go to the flour bin at once.

Again, I want to draw your attention to an expression now principally used as an echo of the past, namely, the term "family physician." When you analyze this expression you will easily find it relates mostly to the man who treats the children of the family. While in general practice it often becomes necessary to call in some specialist, one who truly has made special study of a particular class of ailments, yet the family physician gets to see, diagnose and treat these cases first. Whether it be a mastoid trouble, a middle-ear disease, a sigmoid sinus thrombosis, a laryngeal croup, where intubation or tracheotomy must be done, an appendicitis that must be operated on, a fractured skull elevated or resected, or what not—no matter, the family physician sees most of them first, and he should be capable to diagnose and treat, or know fully when his work and knowledge need be supplemented by the proper special assistance; this in itself is no small accomplishment. When this state of things comes to pass, that is, when all medical men learn more of pediatrics and give it more of the attention it so richly deserves, then

> The air so full of farewells to the dying,
> And mourning for the dead;
> The heart of Rachel, for her children crying,
> Will not be comforted.

will find less application than of old.

After the loss of one of his children the poet Longfellow said:

> There is no flock, however well attended,
> But some dead lamb is there.

And yet I think if we knew more of the ailments of our little ones there would not be quite as many dead lambs, and angels would have to be recruited from older candidates.

And now, not only to the Section of Pediatrics, but unto all departments in medicine do I quote:

> Ah, what would the world be to us,
> If the children were no more?
> We should dread the desert behind us,
> Worse than the dark before.
> What the leaves are to the forests,
> With light and air for food,
> Ere their sweet and tender juices
> Have been hardened into wood,
> That unto us are children;
> Through them we feel the glow,
> Of a brighter and sunnier climate
> Than reaches the trunks below.

To you, my fellow workers in this section of God's vineyard is dedicated this sentiment: "The study of pediatrics is worth all the attention it gets, and it does not get all the attention it deserves." "Go ye into all the world and preach this gospel."

1007 Fifth Street.

DISCUSSION.

Dr. W. F. Boggess, Louisville, Ky.—That pediatrics is a subject that has been woefully neglected in the past we will all acknowledge, and it is undoubtedly true that it is a subject which appeals to all of us in the medical schools. If I can teach two facts each year to my medical students I feel that my labor has not been in vain. One of these is, that the diseases of children constitute an individual study. We have just heard of the wonderful disturbances of nutrition in children, and the differences in the development of the nervous system of children and adults. The future men and women will depend on the health of the children, and if we do not take care of our children along the special lines we need not expect future generations to be healthy. The other fact is that the students are to be impressed with the utmost optimistic views in the treatment of diseases of childhood. We have the most occult diseases to deal with, and the most profound disturbances to recognize, with but little help from the patient. We have unknown quantity as to the resistance and recuperative power. We know, nevertheless, that by proper treatment we can often bring back the most discouraging cases to perfect health and hardihood. The schools, I think, are waking up to the fact that we should no longer turn over this very important subject to an assistant, and that the subject is worthy of a full professorship—indeed, should have several professorships, for it is one we can not teach too thoroughly.

A CASE OF PROBABLE GUMMATA OF THE LIVER IN A CHILD OF SIX.*

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PHILADELPHIA.

The case which I have the honor to report is that of a girl of 6, rather small and thin, but, according to her mother's account, always well except, temporarily, during attacks of measles and whooping cough. Her parents are both living, but are generally intoxicated; if only one be found, the other is probably "off on a spree." The father is a steady drinker and contracted syphilis about twenty years ago. Out of thirteen pregnancies, seven of which terminated by abortion, but two children are still living, a healthy man of 23 and this little girl. The others died between 3 and 10 years of age from various causes. No history of tuberculosis was obtainable.

The patient, who was not living with her mother, was first brought to the dispensary of the University Hospital, July 21, 1902. She had complained of pain in her right side two weeks before; this had been followed by slight fever, nausea, vomiting and jaundice. She was constipated and her passages were clay colored, but there was no pruritus. During the four days of fever, her highest temperature was 100 F. As she had failed to improve, she was brought to the dispensary, where examination showed a small, thin child, greatly jaundiced, the conjunctivæ deeply icteric, with prominent superficial veins of the chest and abdomen. The liver was freely palpable, reaching nearly 4 cm. below the margin of the ribs in the median line. There was at this time no tenderness or ascites. The spleen, while slightly enlarged to percussion, was barely palpable. Heart and respiration were normal. There were no traces of the keratitic, iritic, bony or cutaneous lesions of hereditary syphilis. Nor had she Hutchinson teeth, as the second teeth had not yet appeared.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

While her symptoms suggested acute catarrhal jaundice, the history, in spite of the absence of any other characteristic physical signs of congenital syphilis, pointed so decidedly to a probable syphilitic condition that protoiodid of mercury (gr. 1/12) and sodium phosphate (ʒ j) were given four times a day. On this she began to improve, the bowels became regular, nausea and vomiting ceased, and there were no more fever and much less jaundice when she was seen again, July 28.

Some days later, though this treatment was continued, swelling of the abdomen was noted. This gradually increased for about ten days, when she was admitted to the hospital (August 14). The fact was then elicited that treatment had been stopped over a week before admission. Examination now showed a very prominent abdomen, making the extremities seem much emaciated in comparison. There was no doubt of the presence of ascites, movable dulness in the horizontal position reaching to a circular area around the umbilicus, about 4 inches in diameter. There was pain in the right side of the abdomen, with evident tenderness on both sides. Careful examination showed excessive tenderness over the liver, in the midclavicular line, about midway between the umbilical line and the margin of the ribs, extending nearly to the edge of the ribs. On account of the ascites, the liver was not plainly palpable, while attempts to feel it produced great pain. No visible apex beat was found, and cardiac dulness seemed smaller than normal, probably from upward displacement of all the viscera due to the ascites. A faint systolic murmur was audible, heard best just above the apex, with marked accentuation of the second sound near the aortic cartilage. The lungs appeared normal. There was no edema of the face or extremities, no pleural effusion, nor any suspicion of cyanosis.

The ascites gradually diminished on milk diet, gray powder and potassium iodid (āā gr. ij, three times daily), with Basham's mixture and sodium sulphate (āā ʒ ij, daily). Examination two days later showed that the liver, now palpable, was still somewhat enlarged, though not so greatly as at the first examination, over three weeks before. Its lower margin was felt 3 cm. below the edge of the ribs, and a somewhat tender, nodular area was now distinctly palpable, about the size of an acorn, midway between the umbilical line and the margin of the ribs, in the right midclavicular line, continuous with the surface of the liver. The spleen was not palpable, though still slightly enlarged to percussion. Urine analysis showed traces of albumin, together with a marked indican reaction. From 16 to 32 ounces of urine were passed daily, and the improvement continued, jaundice and ascites rapidly diminishing. As these had both disappeared by August 24, all medication except the antisyphilitic treatment was stopped, and her diet was increased. The nodular mass in the liver was no longer so plainly palpable, and the liver had decidedly diminished in size. Two days later she was out of bed for the first time, and left the hospital in excellent condition September 3. Her liver seemed of normal size at this time, reaching almost 2 cm. below the margin of the ribs in the median line. She was given specific treatment, to be continued during one week each month. This was carried out until Christmas, 1902. Since that time she has had no treatment and has kept perfectly well.

From the course of the disease it seems that this affection of the liver, undoubtedly syphilitic in nature, should be grouped among the manifestations of late hereditary syphilis (syphilis tarda). The family history shows the presence of syphilis; and the fact that early signs of congenital syphilis were not noticed in the child can probably be explained by the lack of attention which she received on account of the usual intoxicated condition of one or both of her parents. Some characteristic symptoms were probably present in early childhood or infancy, though they passed unperceived. The excellent results on antisyphilitic medication tend to prove that this hepatic condition was syphilitic in nature.

But few such cases have been published. In fact, syphilitic hepatitis, while common in infantile congenital syphilis, is rather rare among the manifestations of late hereditary syphilis. Outside of the case reported by Dr. D. L. Edsall,[1] which, as his resident physician, it was my privilege to study, I have been unable to find more than one other case of gummata of the liver in late childhood in the literature of the past twenty years, that of Barth.[2] Very few comprehensive articles on the manifestations of late hereditary syphilis are to be found at all, and reports of cases are rarer still. Fournier[3] devoted an entire volume to them, while Barthélemy,[4] in 1884, was able to collect but 30 cases of late congenital syphilis occurring in patients ranging from 2 to 34 years of age, confirmed postmortem. In but 6 of these patients were gummata of the liver the only lesions found at autopsy, while in 13 there was marked interstitial hepatitis beside the gummata. Hudel's extensive monograph on syphilitic hepatitis, quoted by Holt,[5] was unfortunately unattainable. In 1890 he was able to collect only 47 cases of late syphilis of the liver, including those of Barthélemy.

Edsall's case occurred in a girl of 14, whose only signs of congenital syphilis were deafness, ozena and scars from an ancient keratitis. There were dyspepsia, headache, dyspnea, loss of flesh, edema of the face and extremities, anasarca, double pleural effusion, ascites and two large, hard, nodular palpable gummata of the liver. She was sent into St. Christopher's Hospital for Children with the diagnosis of sarcoma of the liver. Her spleen was also somewhat enlarged. There was albuminuria, but no fever at any time. On mercurial inunctions and potassium iodid the masses disappeared in two months, yet the liver remained hypertrophied and hard. A year after discharge from the hospital examination showed a completely normal liver. A somewhat similar case, in a girl of 15, has been reported by Barth, with postmortem confirmation. Delbet[6] reports an interesting case of gummata of the liver in a child of 2½ years, with ascites and slight jaundice, on whom laparotomy was performed for a supposed malignant growth. Recovery followed.

The pathology of the late hepatic manifestations of hereditary syphilis has been discussed by Barthélemy, Fournier and Hudelo. Barthélemy finds the form in which there are only gummata very rare, while that containing gummata with diffuse interstitial hepatitis is more frequent. Fournier[3] considers diffuse interstitial hepatitis the most common form of late hereditary syphilitic hepatitis, cases of which have been reported by Engel,[7] Depasse[8] and Créquy. Fournier states that gummata, when present, are, as a rule, only found at autopsy. Therefore, a hypertrophied liver, cured on antisyphilitic treatment, may have contained gummata which, perhaps, were situated where they could not be palpated. Thus it is more correct to consider both forms together, the gummatous and the diffuse interstitial hepatitis. Rarely the hepatitis may be amyloid.

Fournier considers jaundice an unusual symptom. Henoch[10] considers both icterus and ascites rare with syphilitic hepatitis. Beside the irregular enlargement of the liver, the spleen is usually somewhat enlarged, and albuminuria points to some renal involvement. Baginsky[9] reports the case of a boy of 4 with keratitis, followed later by swelling of the left lobe of the liver with ascites, slight icterus and hematemesis. In most textbooks the subject of hepatic affections in hereditary syphilis receives but scant attention. Osler,[11] Holt and Gerhardt[12] mention the occurrence of gummata of the liver in late hereditary syphilis; Comby[13] notes the occurrence of diffuse interstitial hepatitis with gummata, ascites and pain.

The diagnosis is not difficult when other characteristic signs of hereditary syphilis are present. Yet, as Edsall states, these cases are generally mistaken for malignant growths of the liver. Fournier believes that many cases of gummata of the liver escape attention because they usually run a symptomless course. Edsall also refers to the possibility of calling the condition leukemia or splenic anemia. Henoch, in his large experience, has never seen a case of late hereditary syphilis. He believes that many of the cases described by Barthélemy were simply chronic interstitial hepatitis from some other cause. This is evidently not the case, however, as the existence of this condition has been proved by pathologic examination. Engel calls attention to the predominance of the female sex among the few cases of late syphilis of the liver reported, in all less than 50, including the cases both of diffuse interstitial and gummatous hepatitis, as manifestations of late hereditary syphilis.

It is, of course, possible in this case that the syphilitic affection may have been acquired and not congenital. But the family history is so decidedly typical and the possibility of the early symptoms having passed unperceived so perfectly probable that it seems unnecessary to search for further explanation. The presence of the distinctly palpable node on the surface of the liver also excludes simple hypertrophic cirrhosis, for which, besides, there was no known cause. Though such cases are rare, they probably occur more frequently than is commonly supposed, passing unperceived or being mistaken for malignant growths of the liver. From the standpoint both of diagnosis and treatment these cases are most important, since, even though syphilis only be suspected, specific treatment deserves a trial and may effect a cure.

My thanks are due to Dr. J. P. Crozer Griffith for the privilege of reporting this case. The patient was under treatment on his service last summer during his absence from the city.

225 South Twentieth street.

REFERENCES.

1. D. L. Edsall: Archives of Pediatrics, 1901, xviii, p. 425.
2. H. Barth: La France Médicale, 1882, ii, p. 605.
3. Alfred Fournier: "La Syphilis Hereditaire Tardive," 1886.
4. M. Barthélemy: Archives Générales de Médecine, 1884, xiii, p. 513.
5. L. E. Holt: "Diseases of Infancy and Childhood," 1897, p. 1055.
6. Delbet: Revue Mensuelle des Maladies de l'Enfance, 1893, ii, p. 33.
7. Hugo Engel: American Journal of Obstetrics, 1883, xvi, p. 97.
8. Depasse: Revue Mensuelle des Maladies de l'Enfance. 1886, iv, p. 360.
9. Adolph Baginsky: "Lehrbuch der Kinderkrankheiten," 1899, p. 906.
10. E. Henoch: "Verlesungen über Kinderkrankheiten," 1890, p. 113.
11. W. Osler: "Principles and Practice of Medicine," 1898, p. 244.
12. Gerhardt: Berliner klinische Wochenschrift, 1900, xxxvii, p. 1048.
13. Jules Comby: "Traité des Maladies de l'Enfance," 1899, p. 176.

DISCUSSION.

Dr. R. B. Gilbert, Louisville, Ky.—Late syphilis of the liver is certainly very rare; I can only recall two cases in my experience, and these were rather recent. The first of these cases was very much like the one reported in the paper. It occurred in a girl of 5 years, and the ascites was enormous and proved most rebellious to treatment. After some hesitation I tapped the child and took away a little over one gallon of fluid. After this medicine seemed to have some effect, but the fluid accumulated again very rapidly, necessitating another tapping in about ten days. After this she improved steadily, and under mercury and iodid of potassium was restored to full health. The other case was a female infant of 18 months, with an abdomen so enormously distended that breathing was greatly impeded. I drew off from this child over one quart of fluid with great relief to the little one. This was only a few days ago, but I expect a good result. The paper has greatly interested me because several clinicians criticised me severely in connection with my first case, and advised against any radical or heroic treatment.

Dr. C. F. Wahrer, Fort Madison, Iowa—I often wonder how much hereditary syphilis complicates many of the diseases of childhood or masquerades under the guise of some other disease. I have felt that when in doubt mercury or iodid of potassium, or both, should be given.

Some time ago I was called to a little girl of 4 years who was supposed to be in danger of dying. I examined the child and found a weakness of the heart, but none of the classical symptoms of any special variety of organic disease. The child had had none of the diseases usually causing disease of the heart, yet the heart muscle was weak and the innervation of the heart appeared to be disturbed. I privately inquired into the previous history of the patient, but obtained no information. I was subsequently called to see two other children in the same family who were similarly affected. Finally the mother came to me to be treated for syphilis, and then she told me that her husband had contracted syphilis some years before, and had been improperly treated. I then learned that two of her children had presented evidences of syphilis and had died very suddenly after birth. I accordingly put the whole family under treatment, and three years later the mother gave birth to a child, who now, at the age of 8 years, appears to be perfectly free from syphilitic taint. Since this medication the other children have had no more attacks of heart trouble.

IS THE REALIZATION OF REASONABLE IDEALS IN DENTAL EDUCATION NEAR AT HAND?*

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Reasonable ideals in dental education would seem to be defined by those standards as yet unattained and not yet in practical working, but which are admittedly possible and desirable in the estimation of the leading dental teachers, practitioners and examiners of this and foreign countries as expressed and promulgated by them personally and in the councils of the great national and international organizations. In no other country in the world is dentistry esteemed so truly a separate and distinct science and profession as in the United States of America.

Most of our schools are independent of and free from domination by the medical profession and medical schools, which is a condition not at all to be found in the schools of Europe, where our beloved profession is held as a mechanical art tacked onto a background of medical didactics.

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Every enthusiastic lover of his profession probably has formed an ideal for himself, or for some one in whom he is interested, which should represent the summing up of his dream of educational perfection in dentistry, but the chief difficulty in the way of the general adoption of these ideals is, that they are as various as they are ideal. One man will urge that an academic degree is of main importance, preparatory to the study of dentistry at all, while another will insist that beyond the simplest of common school preparation the wisest educational prerequisite for dental college is found in a term of pupilage in the office of a successful practitioner where the study of text-books is a mere incident and the education is conducted on the principle carried out by the celebrated Mr. Squeers at Do-the-boys Hall, England, *i. e.*, teaching spelling as follows: "w-i-n win, d-e-r der, winder. Go and wash it."

And then there are all the intervening ideals that can be thought of, as wide in variation of detail and almost as numerous as the personnel composing the dental profession, and it will not be denied that there is fully as great a percentage of dreamers, cranks and would-be prophets and leaders among us as is to be found in any other calling. It is out of the multitude of counsel, based on actual experience and effort, that reasonable standards can be evolved. The educators and examiners have been each and all striving for wise standards, that will fill the educational ideals for some years to come, and also be practicable and attainable as a general fair minimum requirement by all educational institutions worthy the name. The dental literature for the past several years has overwhelmingly pointed to high school graduation and four years of special dental training as the minimum place where standards could be with safety set up and permanently established. The variations in standards for high school in different portions of our country are great. Indeed in some states having dental schools there is practically no established high school worthy the name. But like all other commodities schools accommodate their curriculum to the demand, and, at any rate, equivalents can be easily and fairly set up through the system of preliminary examination now in operation under the rules of the two national associations of faculties and examiners, so that the decision as to what is a reasonable requirement in high school graduation can be very easily attained. And even where there are elective high school courses to be had, it is but a matter of detail to elect and maintain a reasonable equivalent. The college course has been advanced for several years to three years for graduation, and the addition of the fourth year to the curriculum which is to be inaugurated in the present year in all our schools completes what may be properly denominated reasonable ideals in dental educational standards.

If all the schools composing the N. A. D. F. were departments of properly endowed universities, and thus relieved of the everlasting commercial handicap, there would be no question as to the immediate establishment of reasonable ideals. But the fact obtains that a large majority of them are practically struggling for existence and feel they can not be too particular in their standards.

Having fairly determined what should be demanded and established in standards the question arises, who shall establish and be responsible for the carrying out of these standards? The answer is, the colleges through their national associations and the examiners standing behind, protecting, insisting and encouraging by the official authority that is in them vested. This being accepted as the proper method, all obstacles that beset the path and intercept the attainment of the goal must be squarely faced, with the view to most directly overcome them or pass around them in the onward course. The men to be convinced and enlisted and the means, the employment of which will most likely and directly conduce to the ends sought, are important. What is the power that must be invoked?

For over forty years dental schools have been pursuing their steady growth in size of classes and in numbers without there having been set up a single fixed minimum educational requirement for beginning a school course that could be in any sense claimed to be an established prerequisite. The demand for skilled practitioners was so great during the period of phenomenal growth and development of this great country following the close of the Civil War that perhaps it was as well that this should have been so, but to-day the demand is not so much for mere artisans as for educated, scientific, professional—gentlemen, if you please —who shall be competent to take the helm and guide the destinies of a great profession that is more nearly an exact science than any other, except it be, perhaps, the law.

Attempts at the raising of requirements have been continuous, and the past five years have seen the establishment of two years' high school preparation, and the present year inaugurates the four year course. This advance up to date, in spite of the prediction of the pessimists and conservatists that putting up the bars would financially ruin the smaller schools, has been followed by an era of unprecedented prosperity to the schools, and when it has been honestly enforced the quality and character of the college output has been in the main materially improved.

The universities have been held back for years, hoping by slowly raising the educational requirements to enable the weaker schools to keep pace and so hold the national body together. It would seem that this has proved a mistaken policy, for the proceedings of the national association of colleges are filled with charges and trials, convictions and fines against school after school for the violation of the plain rules of the body as regards the receiving and giving standing to students taken into their classes, with no other earthly object apparent than to swell the income of the struggling institutions. This is, of course, human nature, but it is none the less scandalous, notorious and disreputable in the highest degree and should be branded with the condemnation of the profession at large.

A case in point of what is constantly going forward in the effort to swell classes at whatever risk (and the half of which is never brought to light) is that of an endowed university which was compelled to refuse admittance to its classes the present year to about thirty matriculants because they did not possess the prerequisite education for admission to the third year of high school, as required by the rules of the two national associations. These men applied elsewhere, and most of them, it is believed, are now enrolled in the classes of other schools belonging to the association.

Another instance is that where one school sought (and did in some degree succeed in its undertaking) to swell its own classes by sending out emissaries, cappers, or steerers, offering in wholesale lots to almost the entire classes of a competing school reduced tuition rates varying from $25 to $65 for the $115 advertised tuition fees.

Another instance of flagrant attempts on the part of schools in the full membership in the N. A. D. F. to evade the rules is where one of them, by the admission of its dean, has taken into its freshman class for regular work a number of matriculants who had signally failed to pass the preliminary examination (set up by the national association as its minimum standard for admission to classes) before the duly accredited appointee of the state superintendent of public instruction, and then attempting to build up some sort of excuse for its conduct by not only attacking the educational fitness of the examiner, who, by the way, is the honored principal of a district school in a large and flourishing northern city, but also by attacking publicly his character as an honest man and public servant, and thus attempting to excuse itself for having these men in its classes at all, even under the name of "specials" and "in our preparatory classes, besides doing regular freshman work." And this school is evidently banking on being able to control enough "inflooence" in the national association to cover up or else explain away its conduct or, at the most, escape with a "fine," as though payment of money could in any sense atone for the violation of the law of common honesty.

There is also the lamentable spectacle of schools posing as the very "ideal" of everything desirable and whose official heads are shocked and hurt at the mere suggestion that any one should presume to criticise them or question their reputability, that are constantly and persistently flooding the secular press of the country with paid pictorial advertisements of their classes, foot-ball teams, handsome, noted and extra-skilled teachers and instructors, exploiting the peculiar advantages of the institution and its professors over all competitors, all done in a style to put to the blush the common advertisers of the cheap "dental parlors" type.

Such things unchallenged and unrebuked certainly do not tend to the realization of ideals and most certainly do not offer incentives to enter our profession to the class of young men our profession most lacks. This is the sort of thing which has always stood in the way of the proper establishment and maintenance of ideal standards. It would seem if we are to establish ideals for practical use that the public stamp of condemnation should be put on such practices and the guilty institutions incontinently thrown out of the national organization and made a public example of.

It is futile for this body, composed of the membership of the "reputable" colleges of this country, to adopt for the government and conduct of its members certain rules and standards and methods of procedure based on high ideals of ethics and mutual protection, to be accepted by the profession at large as a criticism of the schools' reputability, and then devote a large part of its annual sessions to inventing excuses and apologies for flagrant and open violation of the letter or spirit, or both, of these standards and rules, thus giving to the outside world the very reasonable impression that the body is dominated by anything but the real spirit of building up ideals that their rules and standards would indicate. It is high time that the college association awaken to the realities of the situation. There is at this time, as a result of years of struggle and contention between schools and the examiners for the establishment of specific standards, accepted by the schools and made by the boards their measure of reputability—there is now, I say, a period of mutual accord and trust and peace between these bodies which should be the harbinger of better things to come. The schools are assured of protection by the boards from any infringement and violation by competing schools, made and provided that the college association will purge itself of the violators and enforce its own rules without fear or favor.

In order that ideals may be sooner and more surely established and maintained the boards of examiners, with all fairness and reasonable consideration for the interests of honest educational efforts, must, nevertheless, be mindful of their official oath to carry out not only the letter but also the spirit and intent of the law for the protection of the public. They must, in national association, stand squarely together on reasonable requirements and, more than all else, have the courage of their convictions in passing on the character of the colleges and their output, constantly having in mind that the goddess Justice does not close one eye and blink the other when on duty.

If the schools will rise to the occasion and set the pace the examiners will most assuredly help and sustain them in holding it steadily up. If N. A. D. F. will not purge itself and be honest in enforcing its rules there will be but one way to move the profession forward, to-wit, the better and honest schools will naturally unite themselves together and the examiners must join them in a newer and higher emprise on a surer and, it is to be hoped, better laid foundation.

DISCUSSION.

Dr. Eugene S. Talbot, Chicago—There is perhaps no one in the country so well posted on the management of dental colleges as the essayist. He is one of the foremost men who has been looking forward to the future of dentistry and has done a great deal in the way of legislation. He would have been here at this meeting but for the fact that the legislature is now in session and changes are being brought about in the state law in Wisconsin. He wished me to extend his thanks to the Association for its courtesy in having his paper read and regrets that he could not be present.

There is no doubt that there is a good deal of underhand work going on in some dental colleges. I know of three or four dental schools in which agents are sent out soliciting students. A percentage is paid these agents for procuring the students. There are many other glaring deficiencies in the methods of obtaining students. I was somewhat surprised that more was not said along these lines.

I understand it is the intention of the national board to bring this subject before their meeting for the purpose of discussion. I believe the time has arrived when the departments of dentistry connected with universities will have a large influence. Now that the universities have a method for the purpose of uniforming the education in all their departments and also for the purpose of raising the standard of qualification for admission to these different departments, the time is near at hand when the graduate of dentistry in this country will be on an equal standing with the graduates of other specialties.

Dr. M. H. Fletcher, Cincinnati—I do not know that I have much to say, except that I am interested in bringing about a higher standard of dental education. As a member of our State Board of Dental Examiners for five years, I have been greatly chagrined to know that our laws compel examiners to give such elementary questions. I would consider a first-course student in either dentistry or medicine below the standard if he could not pass such an examination. There is every reason, from my standpoint, for extreme effort in raising the standard, and no doubt such men as the essayist and those interested in bringing it about need the co-operation of all good men in this work. I sincerely trust that the day is not far distant when the standard of efficiency may be raised.

Dr. M. L. Rhein, New York—It goes without saying how much we are in sympathy with the elevation of the standard of qualifications for admission to a dental educational school. I feel personally that Dr. Chittenden made his paper a little weaker than he intended when he spoke of the smaller colleges being irretrievably hurt by the length of the course, because I feel very much on this subject as was expressed by Dr. Billings, the President of the Association, in his opening address, that the time has come when the smaller educational institutions must go out of existence. There is no use for them at the present time. I would even say that I think the idea of proprietary educational institutions is a mistake. I think this Section should come out flat-footed on the question of men enjoying a salaried position due entirely to the income of the institution with which they are connected. That has invariably been one of the worst features connected with proprietary dental education in this country. If the efforts to raise the standard of dental education is a blow at this sort of institution, it is a blow that is well merited and with which, personally, I am in full sympathy, because the sooner they are eradicated and destroyed so much the better for the interests of the country at large. How much better it would be if there were fewer institutions where there was a distinctive salaried position of an amount to enable the proper teacher to be selected irrespective of the necessity of earning their living by the practice of their profession. It is impossible at the present day for the real professor of any branch in a dental institution to be engaged in the active practice of his calling. His attention to practical dentistry should be confined to the infirmary division of the institution with which he is connected. That is the idea we have to look forward to in dental education. t makes little difference to my mind how much we raise the tandard, if we fail to accomplish the real results.

There is just one little point of difference that I have with Dr. Chittenden in his paper, that is, the words of criticism that he makes at institutions of character for keeping themselves advertised, as he says, in the eye of the public, advertising heir superiority over the smaller institutions. I hardly beieve, if I could talk this matter over with Dr. Chittenden, that he would see this in the light in which he appears to, judging from his paper. To my mind, it is one of the forms that is necessary to use to drive out of existence the inferior institution. It is impracticable, in my view, to compare any one of our great institutions with an advertising dental parlor; so, I think, Dr. Chittenden has made rather an unfortunate mistake in a comparison of this kind. These large institutions are constantly before the eyes of the public in the public print. A very necessary form of the education of the young men today is the athletic surroundings of the university. There are differences of opinion regarding their value, but at the present time they have the sympathy and the accord of the American people. I myself believe that they play an important part in the welfare of our educational institutions. I believe they do good, and can do harm. Devotion of time to them to the neglect of studies is the same evil which besets every young man in all surroundings of life. A great deal of the advertising of departments of universities is of such a nature as is not directly sought for by these universities. It is worked up by the individual parties, and I personally see no harm in it. I believe this is a sort of competition which will bring out better features from the opposite institutions.

Mr. T. Constant, Scarborough, York, England—I have so little knowledge of the condition of education in this country that I am hardly in a position to speak on the subject. At the same time, speaking generally on the question of education, a subject to which I have given some attention, I think the most necessary thing in considering the educational conditions of any kind is to insist on a very high standing of preliminary education. The time that is necessary to give to the application of technical knowledge, when the mind is very receptive, as in the case of medicine and surgery, and especially in dentistry, is so largely devoted to the requirements of special knowledge that one's general knowledge is liable to be neglected. I think, therefore, that prior to examinations of special studies, one's general education should be as complete as possible. I feel that the fewer educational centers we can have the better. The facilities for travel now are such that distances are not the consideration they used to be, so that one great objection to having centers of education is removed. I therefore think that great harm is done, and I believe from my little knowledge, particularly so in this country, by multiplication of centers of education. On the same lines I believe myself in the uniform standard of examinations. I think if all the states of America united and had one national standard in examinations to which it became necessary for every student to present himself before being licensed to practice it would be a good thing. He could then succeed in taking the ordinary university degrees. License to practice, I believe, should be determined by national examining centers.

Dr. W. E. Walker, New Orleans—I believe the idea of the formation of great universities with dental departments is the correct one, and that the working out of the plan as it is being done in Harvard is really what it ought to come to; that there should be the unification of preliminary requirements for all the different departments instead of having one for medicine and another for dentistry, the basal studies being taken alike by all, and capped by the special work according to the field a man intends to make his life work, though the fingers should have some training throughout.

The question of preliminary requirements is a very difficult one to handle. Because it was found that when the dean examined the students he was so influenced, not only by his desire for the college to grow, but by the forces brought to bear on him by other teachers, that he would sometimes admit students that ought not to be admitted, it was thought to overcome that by the requirement that the dean should no longer examine students for entrance, but that the state or county superintendent of education should have the matter in hand. The law does not specify whether it shall be the superintendent of the county in which the school is located or in which the student resides. The result is that there is a different standard. We find many boys coming from the country where the standards are low and where the county superintendent will allow himself to be influenced by personal feeling and give him a certificate which he would not have received had he come to the educational center to be examined by the superintendent of the county in which the school is located, where the standard would be higher. I have an instance in mind in which a student was examined and refused by the examiner of the county in which the school was located and went home and was passed by the superintendent of the county in which the student resided. There must, therefore, be some changes in that direction. Just how it is to be done I do not know. A national body to examine all applicants would probably work most satisfactorily.

Dr. Chittenden*—The only comments I would make in discussion of this paper on educational ideals is as to the object and intent of the paper itself. As you are all aware, I have most excellent opportunities officially to gather correct information concerning what is going on in the dental colleges, some of which is open to criticism and condemnation. It was my desire, in this unofficial way, to acquaint the profession at large with the irregularities, quibbles and sharp practices that are being used and which the schools themselves appear to have the idea are unknown and never to be known by the public. It has seemed to me there has been enough posing and not enough plain honesty of purpose. The paper only hints at a lot of abuses which have, to those watching closely, become offensive, both in practice and frequency of occurrence. It is time the profession at large is fully informed of the situation and given an opportunity to speak out, demanding reformation. The keynote to the condition referred to is, of course, commercialism. There is no question that if honesty could be placed before money interest in the conduct of all the schools for a single year, and standards put where they reasonably belong, that the commercial side of dental education would take care of itself, and financial interests involved be greatly benefited, and it is a great wonder that the educators cannot or will not see this fact. The intent of the paper in detail was to throw some flashlights in silhouette that would bring a quick, sharp understanding of the situation into view, and nothing said in it has been engendered by or intended to convey any sense of bitterness or unfairness to the schools themselves. I have reason to believe the National Association of Dental Faculties will be given an opportunity this summer to squarely meet this situation, and I most devoutly hope and pray, for their own and dental education's sake as well, that they may meet it squarely in the spirit of true professional honesty and singleness of purpose.

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* Dr. Chittenden not being present, his paper was read by Dr. W. E. Walker, New Orleans, and these closing remarks by the author have been furnished subsequent to the session.

THE ABUSES AND USES OF VENESECTION IN THE PRACTICE OF MEDICINE.*

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Though for centuries venesection was considered one of the most valuable methods to be employed in the cure of disease, it has now fallen entirely out of use.

The present generation of physicians, indeed, has seen so little of the practice of blood letting as a therapeutic agent that it is hard for them to realize how universally it was used even as late as the middle of the last century.

At the time the writer commenced the study of medicine (about fifty years ago) the favorite text-book used by medical students was Watson's "Practice of Medicine." It was indeed a charming book, and one that for beauty of style and literary diction could not be surpassed. It was, however, in some respects a most discouraging book. Watson would give the most vivid pictures of the symptoms and progress of diseases and yet when it came to their treatment all diseases were apparently treated in nearly the same way. His favorite method for the curing of nearly every inflammatory disease was practically limited to the administration of calomel or other mercurials and the free use of bleeding and blistering.

As I read this book I used to ask myself: Is it possible that our means of treating the physical ills of our patients are limited to the use of the above three methods, and its seemed to me that if such was the case then the practice of medicine was a delusion and a failure.

Fortunately, about this time (1853) I procured a copy of J. Hughes Bennett's great work on clinical medicine. I received from that book a light and illumination on my studies in the science of medicine that I never had before.

Bennett was a great clinical teacher and reasoner, and while he used bloodletting in a moderate degree, yet he combined with it the literal use of nourishing diet and stimulants. Like the immortal Graves, he was far ahead of his time. Graves was the man who at a time when all the physicians of his time were bleeding and starving their fever patients, dared to feed those liberally under his care. Dr. Graves asked that when he died they should carve on his tombstone, "Here lies the man who fed fevers."

The picture given by Le Sage in his immortal book, "Gil Blas," of the character of Dr. Sangrado probably aided largely in calling attention to the absurdity and harmfulness of the free blood letting, so much used by the physicians of that day.

In Gil Blas there is one exquisite piece of satire that we must quote. During a time of great sickness and mortality the notary is sent for to make the will of a sick man. He immediately asks the question, who is the attending physician? On being informed that it was Dr. Sangrado, he at once says they must hurry and lose no time, for if they do not there will be no opportunity to make the will.

Physicians seemed in that day to regard the inflammations of an organ as a monster that had taken possession of the part and that could be destroyed by the abstraction of blood from the veins or by blistering and the [illegible]ration of mercurials.

The more accurate knowledge of our day (though still incomplete) has shown us that most, if not all, of the phenomena manifested in the course of the acute inflammations are due to the efforts of the organism to defend itself from the inroads of micro-organisms or the toxins produced by them. We know now, also, that no inflammatory disease can be suddenly cut short by any method of treatment. What we can do, however, is to guide it to a favorable termination.

Admitting, therefore, the utter failure of venesection as a means of cutting short or of curing acute inflammations, the question then arises, were our ancestors in the practice of medicine entirely mistaken in their practice of this now forgotten remedial agent? We should remember that this method of practice was employed by many of the brightest lights of our profession. The physicians of former times were just as acute observers of diseases as those who practice medicine now.

Have we then not lost something of value to our science in our entire abandonment of the practice of venesection? Are there not cases even now that would be benefited by blood letting, and have we not gone from one extreme to another in utterly abjuring it?

Arthur Helps, the great English essayist, says that when a man attempts to avoid error on one side he is very apt to fall into the opposite error. The pendulum of truth is apt to vibrate from the error on this to that of the opposing side.

There are now a considerable number of the members of our profession who believe that while the idea of cutting short an acute inflammation by blood letting is an absurdity, yet in certain diseases venesection is a valuable therapeutic measure, and in some cases is absolutely necessary to preserve the life of the patient.

VENESECTION IN CEREBRAL ENGORGEMENT.

The class of cases benefited by the abstraction of blood are chiefly those in which there is an abnormal blood pressure in the body which endangers the rupture of a blood vessel in the brain or causes a stasis of blood in some vital organ. Let me give an illustrative case:

Mrs. G., aged 56, was placed under my care a few months ago, for the following symptoms: First, a feeling of numbness of the right side of body, involving both upper and lower right extremities, persistent headache, more marked on left side; the headache increased in severity; then she felt very giddy on attempting to walk; her speech then became affected and articulation imperfect. On examining her, I found her to be a stout plethoric woman who had always enjoyed good health, and weighing about 170 or 180 pounds.

She had always been accustomed to living on a farm, and had usually been working a good deal in the open air. For about a year before I saw her, she had changed her occupation to indoor work. She was in fact during that period employed in taking care of an invalid lady and had remained a great deal indoors, very rarely leaving the house. She generally had enjoyed her food and had usually eaten a liberal supply of meat and nourishing food, and no doubt had partaken of more nutriment than her system needed.

Here was a plain case of threatened cerebral apoplexy, and she became very much alarmed (and with reason) as to her condition. Here was a woman past the menopause and having not the relief that menstruation might have given to the overfilled blood vessels, a woman suffering from a hyperemia with threatened fatal results on account of the degeneration of the cerebral blood vessels which to a greater or lesser degree must be expected at her age. Now would any physician hesitate to bleed in such a case as the above? The proper treatment in such a case is to bleed freely from the arm, twelve or sixteen ounces of blood, and follow this by brisk purging with saline purgatives and low diet. Such a case can be brought (as was this one) from the jaws of death by the proper treatment such as outlined above.

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* [illegible] before the Medical Society of the District of Columbia,

BLOOD LETTING IN PNEUMONIA.

Another disease in which bleeding is sometimes necessary to prevent death is acute or croupous pneumonia. In its great fatality in our day acute pneumonia is a standing disgrace to the practice of medicine.

There can be no question that acute croupous pneumonia is worse treated and the percentage of mortality from it greater than it was thirty or forty years ago. This is admitted by all modern writers on the subject, and it will only be necessary here to give a few references to prove the above statement.

The nestor of American medicine, Dr. N. S. Davis,[1] says "the mortality in pneumonia has increased during the past forty-five years." The *Philadelphia Medical News* (March 6, 1897) says mortality from pneumonia has increased during the past fifty years. In New York City out of the 41,000 deaths occurring in 1896 5,383, or nearly one-eighth, died of pneumonia. The mortality from pneumonia in New York City hospital during the period beginning 1834 and ending 1843 was 25.4 per cent., during 1844 to 1853 25.7 per cent., 1854 to 1863 23.8 per cent., 1864 to 1870 27.7 per cent., 1877 to 1886 38.8 per cent., 1887 to 1895 34.7 per cent.

Dr. Putnam[2] of Boston says pneumonia mortality has increased 50 per cent. during the past thirty years. *American Medicine* (May 18, 1901, p. 277) says pneumonia is more fatal than tuberculosis. In New York City, from 1890 to 1900 there were 56,092 deaths from pneumonia and 50,490 during the same period from tuberculosis. In Chicago during the same period there were 25,228 deaths from pneumonia and 22,957 deaths from tuberculosis. The following extract is taken from The Journal of the American Medical Association (Jan. 24, 1903):

> THE INCREASING PNEUMONIA MORTALITY.
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> Nearly three years ago we called attention to the fact that statistics showed that pneumonia was causing more deaths than tuberculosis. We believe that we were the first to call attention to this fact, but it is becoming generally recognized.
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> The circular issued by the Health Department of Chicago for the week ending Jan. 17, 1903, begins with the statement: "Since the census year 1900 pneumonia has claimed more than one-eighth of all the victims of the Grisly Reaper in Chicago; one-third more than consumption, and 46 per cent. more than all other contagious and infectious diseases combined, including diphtheria, erysipelas, influenza, measles, puerperal fever, scarlet fever, smallpox, typhoid fever and whooping cough, the total of which deaths was 4,489 as compared with a total of 6,562 deaths from pneumonia." This statement is a striking one and certainly confirms our earlier assertions as to the predominance of pneumonia over other infectious diseases as a cause of mortality.

American Medicine (Jan. 31, 1903) says, concerning the mortality in Chicago, that during the first 17 days of January, 1903, more than one-fifth of all deaths was due to pneumonia. The deaths from tuberculosis in Chicago in 1860 were 25.28 pere 10,000 (276 deaths in 109,206 population). In 1900 they were 15.30 per 10,000 (2,599 deaths in 1,698,575 population), a decrease of nearly 40 per cent. (39.1) of tuberculosis mortality in the 40 years. From pneumonia the 48 deaths in 1860 represent a rate of 4.40 per 10,000 of the population; in 1900 the 3,389 deaths represent a rate of 19.95 per 10,000, an increase of more than 350 per cent. (353.4) of pneumonia mortality. The whole country shows a decrease of 20.7 per cent. of deaths from tuberculosis and an increase of 7.4 per cent. of deaths from pneumonia during the forty years.

What is the cause of this increase of mortality among the patients suffering from pneumonia in our time? Probably one important factor in the increased fatality in the cases of pneumonia occurring in large cities is the class of patients who are treated in city hospitals.

Many of these patients are hard drinkers, and the mortality among such persons is always very large. Another factor that has been dwelt on and has undoubtedly swelled the average of mortality has been the advent of *acute epidemic influenza* (commonly called la grippe). Many other causes might be adduced to explain the failure of our art in curing this disease, and the interesting query comes up whether our change of treatment and abandonment of blood letting has not been a factor in producing this discouraging result.

Let me describe a class of cases of acute pneumonia in which blood letting is not only advisable, but absolutely necessary to save the life of your patient. We will suppose, for instance, the case of a young man in vigorous health, a hearty eater, full blooded and one who perhaps, while not an habitual drinker, yet loves the good things of this life, not wisely, but too well. Such a young man is attacked with acute pneumonia, and in three, four, five or six days perhaps, you will see crape on his door, and are shocked to hear that he is dead. What is the cause of such a young man's death? In the process of inflammation which occurs, perhaps one-third, one-half or even two-thirds of the lung tissue of your patient is filled up with a glutinous lymph which plugs up every air vesicle and thus preventing almost entirely the access of air in all the smaller bronchi. You cut into such a lung in the postmortem room and you find it solid. You drop it into water and it sinks like a piece of liver or other solid organ. Now what is the condition of that man's circulation? The heart, which perhaps beats normally at 65 or 70 is now beating 100, 110, or even 120, 140 or 150 per minute.

Your patient's face and lips are perhaps cyanosed, his respirations are 30, 40 or even 50 per minute. He lies quiet and says but little, for his breath is too precious to be wasted in words, but with imploring eyes he looks to you for help. In such a case bleed such a patient at once and you will probably save his life. What harm can you possibly do to such a patient by bleeding him? The loss of blood is nothing to him, he has too much of that in his body now for his present needs. In other words, here is an inflamed lung the aerating surface of which is diminished to one-half or one-third, or even one-fourth of its normal capacity. At the same time the heart is pumping the blood with greater force and frequency than in health into the semi-solid lung. How does this patient die? Simply because there is not sufficient oxygen brought to the lung to properly purify the impure venous blood and convert it into the life-giving arterial blood. The heart works harder and harder to perform the impossible task assigned to it, but finally gradually fails in power, and death speedily ensues.

Take in a case like this a pint or a pint and a half of blood from the arm and you accomplish two things, first you take away the surplus blood which is overfilling and engorging the blood vessels of the lung, and secondly you diminish the force and frequency of the heart's action, which is sending to the inflamed lung far more venous blood than it can purify.

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[1] The Journal A. M. A., June 6, 1896, p. 1113.

[2] Charlotte N. C. Medical Journal, September, 1898, p. 299.

The objection may be made that your patient may be unable to spare such a large quntity of blood from the drain thereby made on his vitality; if so the remedy is easy. At the same time that you bleed him, or immediately thereafter, inject by hypodermoclysis under the skin of the thorax or abdomen just the same quantity of normal salt solution (1 to 1,000) as you took from your patient by bleeding.

BLEEDING IN PUERPERAL ECLAMPSIA.

The indisputable facts that puerperal eclampsia occurs most frequently in primipara and in young women in the prime of life would seem to indicate clearly that it must be caused by a toxemia resulting from deficient metabolism and the retention of effete and waste products in the body. What is the cause of this toxemia? How can it be remedied? We are strongly convinced that the cause is a very simple and obvious one, and that this disease is due to the nonassimilation of the large amount of meat and other nitrogenous foods consumed by the majority of pregnant women. After the initial stage of suffering from nausea and vomiting has passed to which many women are subject during the early months of pregnancy, the appetite is apt to become abnormally keen. Patients are encouraged to gratify this abnormal appetite by their friends, and even if the appetite should fail they are urged to eat largely, it being a popular superstition that it is necessary for them to do so in order to nourish properly themselves and their unborn offspring. Another most reprehensible practice is the prescribing by physicians of alcoholic drinks of various kinds at meal times for the purpose of stimulating the flagging appetites of pregnant women. Harm is done by this practice in two ways, first, by stimulating the appetites of these patients, inducing them to partake of more food than they require, and secondly, alcoholic drinks (beer, wine, etc.) diminish the metabolism and encourage the retention of effete matters in the body.

Two other factors entering into the causation of this disease are the neglect to take sufficient exercise in the open air and neglect to keep the skin in healthy condition by frequent bathing and brisk friction.

If the foregoing views are correct and the chief causes of puerperal eclampsia are improper diet and hygiene, the question arises, how can this disease be prevented?

It is my firm conviction, based on 47 years of continuous practice, that many of these cases can be prevented, and, of course, preventive treatment is far more important and more successful than the remedial. The following case is an illustration of preventive treatment;

Mrs. M. R., aged 22, is of healthy physique, and had always had execellent health. She engaged me Dec. 10, 1901, to attend her in her first confinement. She was at this time eight months pregnant. She was to go to Columbia Hospital for Women, which she entered Dec. 31, 1901. She complained of severe and continuous headaches, with sparks of fire before her eyes and some vertigo. Her urine was examined and showed the presence of albumin and tube-casts and a great deficiency in the amount of urea; it averaged only three to four grains per fluid ounce. She was immediately placed upon a rigorous diet, and not allowed to take more than one-third her usual allowance of food. Meat and stimulants were absolutely interdicted, and she was given thin soups and a small amount of milk and farinaceous food. For medication she was given broken doses of calomel, followed by mild saline cathartics so as to secure two or three loose movements of the bowels per day. She was also given a mixture of citrate of potash with a small proportion of potassium bromid. Under this treatment she gradually improved and the amount of urea excreted gradually increased, though it never came up to the normal amount. She was watched carefully, and, greatly to my relief, symptoms of labor set in Jan. 10, 1902. Her confinement and her convalescence were normal and uneventful.

The above preventive treatment, however, has a much wider field in the earlier months of uterogestation. The urine of every pregnant woman should be systematically examined at least once a month until the end of the term.

If albumin is found in the urine (especially if accompanied by deficient excretion of urea) it shows that the elimination of waste material is abnormally lessened; purgatives and diuretics should be given. Hydrotherapy with diminution of or total abstinence from nitrogenous food and alcohol, are also powerful adjuncts in the treatment of these patients.

But there may not be any opportunity for preventive treatment, for the patient may be already in a state of coma or in the throes of puerperal convulsions when we first see her. This is an emergency that will tax to the utmost the skill and self-reliance of the most accomplished physician. What shall we do? Shall we proceed to empty the uterus, bleed, give inhalations of chloroform or use morphia? In regard to the first treatment mentioned all authorities practically agree that if the convulsions develop during the labor, at full term, delivery should be accomplished either by version, the application of the forceps or other means as rapidly as possible. This rapid delivery of the child will very often arrest the convulsions, or if it does not do so entirely, will so mitigate them as to render the case comparatively easy of treatment.

This is not invariably the case, however, for one of the severest cases of puerperal eclampsia ever met in my experience was one in which the convulsions began after the labor had terminated satisfactorily. The labor had not been unusually severe for a primipara, but there was a smaller flow of blood from the uterus during and after the labor than is usual. The patient was a vigorous healthy woman, plethoric and with full tense pulse. The convulsions continued for 24 hours subsequent to the termination of labor, in spite of the free use of inhalations of chloroform, and the administration of chloral and morphia combined with bromids. The attending physician and myself, becoming almost desperate, finally determined to bleed her. By the dim light of a candle we bled her from the arm to the amount of 20 ounces, and there was almost instantaneous relief. The convulsions stopped at once and she made an uneventful recovery. We felt satisfied from the full and hard character of her pulse that the convulsions were continued by the blood pressure on the cerebral centers, and the result seemed to confirm this view of the case.

No one at the present day would wish to revive the old Sangrado system of indiscriminate bleeding for every disease, but it is the firm conviction of many physicians, of whom I am one, that we have been too hasty in abandoning the use of blood letting. The field of usefulness of bleeding, however, is very limited, and it is only in such cases as the one just described that we would recommend it.

That Annual Bath.—To illustrate the rôle that personal uncleanliness plays in disease among the lower classes, *American Medicine* tells the story of a mother who sought the aid of a physician for her sick child. A physical examination being necessary, the physician attempted to remove some of the child's clothing, but became lost and asked the mother to undress the child. She replied, "Aber, mein Gott, I have sewed it in for de Vinter."

A DIAGNOSTIC EXAMINATION OF ONE HUNDRED AND FIFTY CASES OF LEPROSY.

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HONOLULU.

Leprosy is a disease to which the average American physician gives but little thought or study; he is accustomed to regard it as a foreign malady, of interest to him only as a curiosity. This is a mistake; leprosy has existed for many years in various parts of the United States, but the only recognition it has thus far received has for the most part been by dermatologists in the centers of population.

The ordinary general practitioner, "the backbone of the profession," and to whom this paper is presented, is the man on whom rests the responsibility of keeping in mind the general features of the disease, and the possibility of some day encountering a case when least expected, as it is essentially a constitutional disease as much as is tuberculosis, and comes as fairly within his own domain.

With us in Hawaii the disease is on the decline; thus proving the wisdom of the policy of segregation established over thirty years ago. Our method of apprehending and dealing with leper suspects may be stated briefly as follows: The entire inhabited portion of the territory is divided into twenty-six government districts, in each of which a competent, resident practitioner is selected and appointed by the Territorial Board of Health as government physician, with a small annual salary. In conjunction with his private practice he is to treat the indigent sick free of charge, supervise sanitation and vital statistics, return monthly reports on health conditions in his district, etc., and last, but not least, he is to be on the constant, vigilant outlook for lepers. In this latter duty there is placed at his disposal the active co-operation of the district deputy sheriff, who in many instances is the one who discovers the suspect and brings him to the attention of the physician. From these two officials, whose powers and duties in the matter are not optional, but mandatory, come most of the recruits for Molokai. A few of the patients, hidden away for years by friends, are already well advanced in the disease, but very many and perhaps the majority would "pass in a crowd" unnoticed. These are the ones whom the government physician has held under suspicion and silent observation perhaps for months, or even years, to study the progress and development of some slight and uncertain lesion regarded as of no importance by the patient himself, or perhaps by him entirely undiscovered.

Arriving at Honolulu, the suspect is placed in the leper receiving station, an enclosure of several acres containing cottages, wards, dispensary, etc., and situated in a quiet suburb some three or four miles from the business center of the city. He now passes under the care of the pathologist of the Territorial Board of Health, whose duty it is to supplement the work already begun by the government physician, in formulating the history of the case, making a critical study of all symptoms, recording the *status præsens* and demonstrating if possible the presence of the bacillus lepræ. After the arrivals have amounted to about twenty, the official examining board is called together in session at the station to make a final individual review of each case and pass on its disposition.

The following observations are based on an examination of a series of one hundred and fifty cases, mostly native Hawaiians, collected within the past two years and sent to Molokai; the diagnosis in each and every case having been either made or confirmed by a bacteriologic demonstration.

As a means of diagnosis first in importance stands the microscope. Although not regularly and scientifically demonstrated, on account of the universal failure both to obtain a pure culture and to infect any lower animal, yet it is now generally accepted the world over, that the disease is due to the Hansen bacillus, precisely as tuberculosis is due to its own specific germ. The discovery of the *Bacillus lepræ* in suspicious tissue is now considered just as legitimate diagnosis of leprosy as is that of the tubercular bacillus in the sputum of a suspected consumptive, confirmatory of tuberculosis.

The method employed is essentially that of my fellow townsman, Dr. L. F. Alvarez, described by him before the Berlin Leper Congress in 1897. A minute test snip of the suspected tissue is thoroughly triturated in a small mortar with a few drops of normal salt solution; a drop or two of this is placed on a cover glass, dried, fixed and stained with Ziehl's carbol fuchsin in precisely the same manner as with tubercular sputum, bearing in mind the single fact that the *B. lepræ* both takes and gives up its stain more readily than the *B. tuberculosis*, hence, in decolorizing, a very weak acid must be employed. Finally, contrast stain, mount and examine with a one-twelfth oil immersion and a good light. Slides thus made from snips of typical nodules usually show the bacilli in incredible numbers, or rather quantities, as I have frequently observed more than half the field occupied by the bright red aggregations of cell masses, great irregular blotches of solid bacilli in myriads, with small groups and individual elements intervening.

But, as has already been intimated, not all of the cases coming to the station show typical nodules. The majority present, it is true, in greater or less degree, one or more of the symptoms enumerated below, but frequently of so slight a nature as to render a positive diagnosis impossible without the aid of the microscope. In these cases we have to select our test snip from some locality on a given subject where experience has taught us we shall be most likely to find the bacillus. It may be that the best we have is an area no larger than a dime on arm, neck, back or thigh, which shows only a loss of pigment so faint as to be seen only in a favorable light. Slides made from here show a sorry contrast to the ones mentioned above which present a demonstration at first glance. We now anticipate a long and tedious search. With the mechanical stage we go back and forth, to and fro, by the half hour. Not that a leucodermic spot or two is of such grave import, as it is not; but the patient has also, it may be, an open sore on the bottom of his foot which he gravely tells you is from a cut on a sharp shell received a month or two ago while fishing, or there may be a slight atrophy in the palm of one hand; he is under suspicion. This impels one to presevere, when, perchance, one lonely red rod comes into the field; later two side by side; another long search and another single individual; and finally perhaps a group of from twenty to fifty; the diagnosis is no longer in doubt.

Writers of leprosy literature tell us that open ulcers and their discharges are teeming with bacilli; in this I have been greatly disappointed. Take, for instance, the common plantar pedis ulcer perhaps as large as a half dollar and a half a centimeter in depth. I have so many times obtained negative results in smears from discharges or scrapings from its base that I have wellnigh abandoned their bacteriologic consideration. Another disappointment has been the mucus from the cartilaginous portion of the nasal septum. Even so high an authority as Koch has declared that the bacillus is to be found here early and constantly. After many faithful trials in every stage of the disease I have found them so seldom that I now attach but little importance to it as a means of diagnosis.

While the microscope is thus first in importance, it is in practice the last agent to be employed; it is only after all the various symptoms have been canvassed that an appeal to it is made as a court of last resort. What are the chief clinical features whose existence place the subject under suspicion? An attempt will now be made to present the more important ones in the order of frequency as we have found them in our series of cases.

The ancient division of leprosy into tubercular and anesthetic is unfortunate, as to terminology at least. The former, although used, of course, in its dermatologic sense, has long since been wholly appropriated by another entirely distinct disease, and its use in connection with leprosy ought to be abandoned. The latter term also is inapt, as in many well-marked cases of its type anesthesia is not a predominating symptom. There is but one leprosy; it shows in its manifestations a predilection for the skin and the nerves; that is all there is to the "three types, viz., tubercular, anesthetic and mixed" of authors.

First, then, in point of frequency, comes the symptom or rather group of symptoms which, for convenience, we class as maculæ, occurring in 89 per cent. of all our cases. Of these by far the most common are the leucodermic spots or areas which occur in all sizes and in all regions. They seem absolutely healthy to touch and feel; no elevation, no thickening, no inflammation; they seem to have lost a little of their pigment and that is all, unless, as rarely happens, they may be somewhat anesthetic. The patient, as a rule, knows but little of their origin or length of existence. A recent willing patient, an intelligent Hawaiian woman, a leper, anxious to go to Molokai to join her husband and her brother, detailed to me the symptoms of an erythema which occurred some four years ago with chilliness, slight fever and malaise; after these transitory symptoms had passed, the areas occupied by the redness, gradually and permanently lost a little of their pigment. It seems quite probable that such is the usual origin of the leucodermic spot. Taken in connection with other symptoms these spots and areas constitute a strong presumptive and confirmatory sign; taken alone, however, they are of very much less significance.

To the other and rarer lesions grouped as maculæ even less importance is to be attached. They all belong to the array of indefinite "might-be's" daily encountered in every skin clinic, suggesting syphilis, eczema or other ordinary dermatoses and not exclusively characteristic of leprosy. Repeated test snips with negative results have convinced me that, as a diagnostic sign, they are of much less value than is the leucodermic spot.

Next in frequency come the so-called tubercular lesions, the pathognomonic sign of skin leprosy. Under this head we group all patients who show the least trace of the true leprous nodule however slight, and our records show that it was found in 111 cases, or 74 per cent. In many of these it was so slight as to readily escape notice without careful search.

The histologic character of the lepra nodule in and beneath the skin is very suggestive of granulation tissue; in fact, Virchow coined a term, granuloma, to express it; the growth consists of proliferated connective tissue cells and leucocytes, with fibrous intercellular formations and newly formed capillary blood vessels. Ordinarily the nodule varies in size from that of a half pea to half a walnut, but it may be as small as a pin's head, or, on the other hand, of several inches in extent; it is irregularly circular or oval in shape, quite definitely circumscribed, with a well-rounded elevation, not particularly hard or resistant to feel, and in the lighter-skinned races with a tendency to brownish or coppery pigmentation. Its favorite region is the face, with a strong attraction for the lobule of the ear. I can not confirm the statement of authors who mention the elbows as a usual site; I have rarely found nodules in that region. Next to the face, the trunk may show them; less often the limbs. Instead of the nodule there is frequently found, as in the cheeks, for instance, quite an area of subcutaneous thickening, with perhaps slight elevation, the skin smooth, rather hard and firm to the touch, as though there were just beneath it a layer of thin leather. This is believed to be of the same nature as the typical nodule, differing from it only in manner of disposition. The facial disfigurements with the classic leonine expression pictured in the books as typical leprosy are nowadays seldom seen at the receiving station, but are more common at Molokai.

Another symptom of value is the falling of the eyebrows and lashes. Including all patients in which it appeared in any degree the records show 94 cases, or 63 per cent. While many of these presented but a thinning of the eyebrows in the outer half, those recorded as "entirely gone" and "nearly gone" number 31. It seems to be an idiosyncrasy of the disease, occurring without any appreciable change in the skin from which the hairs fall. In this connection it may be remarked that the disease has an apparent aversion to the hairy scalp, as I have not seen a single case thus affected.

We now come to an important group of symptoms more directly indicative of trophoneurotic leprosy as seen in atrophy of the palm and forearm with resultant retraction of the first row of phalanges, combined with contraction of the remaining phalanges, constituting the well-named "leper claw." Like all other symptoms, this one exists in every degree of severity. It may be so slight that the patient himself has not noticed that one palm is thinner than the other; or, in another case, while he is unable to entirely straighten two or three of his fingers, he has not observed that the forearm is somewhat smaller than its fellow of the other side. This group of symptoms constitutes 32 per cent. of all cases. Its usual manifestation, fortunately, is on one side only, but it is not rare to see both hands affected and to a marked degree, reducing the patient to the pitiable condition of almost total helplessness. In all these cases the ulnar nerve above the inner condyle will be felt enlarged and firm as a cord under the examining finger.

Next in order stands the plantar ulcer with a record of 26 per cent. Of variable size and depth, usually single, but sometimes multiple, it occurs most frequently on the ball of the foot, but also on the heel, and I have found it even on the bottom of a toe. As a clinical symptom it must be regarded as of great diagnostic value, as the lesion is very distinctive in its fully developed state and would hardly be produced in any other way. It might be of interest, in passing, to state that with the enforced rest, the generous diet and local treatment, many of them entirely heal in a few weeks' stay at the station.

The text-books have brought into undue prominence the spontaneous amputation of fingers and toes from absorption of phalanges. It is not so common as is generally believed. We have grouped all cases which have shown even a tendency to this condition, as in the slight shortening of a phalanx, together with the very few in whom we have found parts of fingers or toes entirely gone, and our records show that these cases amount to only 16 per cent. of all patients. I recall but one case in which we found a tolerably healthy looking toe hanging by a short fibrous pedicle about three millimeters in diameter. Hence, while the symptom is a very characteristic and valuable one, it is not very common.

Occurring with the same frequency as the above, in 16 per cent. of all cases, is a condition of the hands and sometimes of the feet, recalling an old classic name of leprosy, *elephantiasis Græcorum.* Instead of atrophies and contractions, we now find the wrists, hands and fingers more or less enlarged, rather soft and flabby, with the skin smooth and always of a dusky purplish tint. Except the color, it suggests at first glance a well-marked edema, but lacks, on palpation, the tense or boggy feel of that condition. Another interesting point is that the fingers invariably gradually taper toward their ends, so that about the nails their size is entirely normal. Test snips from several of these enlarged hands and feet have failed to show the bacillus.

Another symptom of trophoneurotic leprosy is facial paralysis, which we found in 11 per cent. of our series, in nearly all of which the side of the face was entirely motionless and expressionless with the orbicularis palpebrarum greatly deficient in function.

Finally, as to the universally recognized symptom of anesthesia. I have frequently found large anesthetic areas of skin to all outward appearance entirely normal; while, on the other hand, I have as often found areas which we would suppose should be anesthetic, with sensibility unimpaired. With us its determination is attended with difficulties and uncertainties. Nearly all our cases are unwilling, unsympathetic patients. Many are overcome by fear and are as profoundly startled by the touch of the head of a pin as by a prick of its point, while the answers "Ae" and "Aole" (yes and no) are given with utter lack of thought, care or discrimination. It is certainly one of the most valuable symptoms, and is probably as frequent a one as authors have claimed it to be. Our own statistics on this point are so meager and worthless as to preclude mention.

These few objective symptoms, while by no means complete, comprise the leading characteristics of leprosy, constituting an efficient aid to its recognition. The more so in that in every leprous case we have a combination of two or more symptoms, and often as many as five or six of them illustrated on the same patient. Thus, we might have leucodermic macules here and there on the trunk, the eyebrows thinned, a palm slightly shrunken, an enlarged and tender ulnar nerve, anesthetic areas, and a shortened toe all in the same patient, who would even then not only fail to attract the attention of his associates, but might consider himself in very good health.

A brief summary of the above may be deduced as follows:

1. The microscope is the supreme agent of the final diagnosis of leprosy. No patient should be committed to a segregated colony without a bacteriologic demonstration of the disease.
2. Of clinical symptoms, maculæ, chiefly leucodermic spots are found in 89 per cent. of all cases.
3. The lepra nodule found in 74 per cent. is the one chief distinguishing lesion of skin leprosy.
4. Thinning or complete loss of eyebrows and lashes is present in 63 per cent.
5. Atrophic changes in hands and forearms with retraction and contraction of fingers and enlarged ulnar nerve in 32 per cent., a leading feature of nerve leprosy.
6. The plantar ulcer found in 26 per cent., usually on the ball of the foot.
7. Absorption of phalanges in 16 per cent., with occasional spontaneous amputation.
8. Elephantiasis of hands and feet in 16 per cent.
9. Facial paralysis in 11 per cent.
10. The entire body should be carefully tested for anesthetic areas.
11. Several of the above symptoms can be found in some slight degree at least in every leprous subject.

THE CHEMISTRY OF CEREBROSPINAL FLUIDS.

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During the last few years I have examined a number of cerebrospinal fluids from lumbar punctures. The analyses are of some interest, as they throw light on such disputed questions as the molecular concentration and the nature of the proteids. In other respects they may serve to enlarge somewhat the already existing knowledge of this fluid. The specimens were usually not analyzed until a day or two after they were drawn, but they were received and preserved in sterile flasks, kept very cold. The first four cases were furnished by Dr. C. J. Aldrich, from patients with febrile temperatures. The last fluid was given me by Dr. C. E. Briggs. I wish to take this opportunity of thanking these gentlemen for the material.

SUMMARY OF ANALYSES.

The results of the analyses are briefly as follows:

APPEARANCE.—Fluids I to IV, are perfectly clear and colorless, III containing a very small sediment; V (from a case of spina-bifida) is slightly pinkish from suspended blood, the corpuscles having a perfect outline. They soon subside and are removed by filtration. The fluid is clear and colorless II contained a delicate whitish membrane, which dissolved, for the most part, in 0.4 per cent. HCl.

SPECIFIC GRAVITY (taken with picnometer).—II = 1.0137; III = 1.0091; V = 1.0079.

REACTION.—Slightly alkaline in all cases.

DEPRESSION OF FREEZING POINT.—III = 0.541° C; IV = 0.535; V = 0.591.

COMPOSITION.—Total solids: III = 9.60 0/00; V = 13.25 0/00 Ash: III = 7.23 0/00; chlorids (as NaCl): III = 5.73 0/00; V = 6.0 0/00. Non-proteid organic matter (by difference): III = 1.64 0/00. Non-coagulable proteid: None in III or V. Coagulable proteid: I = 0.525 0/00; II = 1.16 0/00, globulins present; III = 0.726 0/00 globulin, no albumin present; V = 2.57 0/00 globulin, no albumin present. Reducing substance: Present in I and III (in III less than 0.3 0/00); absent in II (polarimeter, Moore's phenylhydrazin, Trommer's and fermentation tests).

COMPILATION OF ANALYSES.

I have searched through the literature (see bibliography) for other analyses and found about 30 recorded of human cerebrospinal fluid, and a somewhat larger number for other mammals. Adding to these the fluids analyzed by me, I have compiled the following table, which, I think, gives a sufficient picture of the chemical data of this fluid.

	Specific Gravity.	Depression of Freezing Point.	Total Solids. Per cent.	Total Ash. Per cent.	Coagulable Proteid. Per cent.	Reducing Substance. Per cent.	Clorin as NaCl. Per cent.	Urea. Per cent.
Human.								
Number of analyses.	9	3	11	15	20		11	2
Extremes	1.006- 1.0137	0.535- 0.591	9.6- 19.23	7.25- 9.18	0.2- 5.8	0.0- 0.555	4.18 8.0	0.011- 0.098
Mean	1.0079	0.511	10.75	8.5	0.9	. .	6.6	0.071
Proportion of cases within 10 per cent. of the mean	6/9	3/3	9/11	13/15	5/20	. .	7/11	. . .
Proportion of cases within 25 per cent. of the mean	8/9	3/3	12/11	15/15	8/20	.	11/11	.
Dogs.								
Number of analyses.			8					
Extremes	. . . . . .	. . . . . .	13.91- 20.24	. . . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Mean	. . . .	. . .	17.5	. . .	. . .	. . .	. . .	. . .
Calves.								
Number of analyses.	12	. .	12	12	12	. . .		. . .
Mean.	1.0076	. . .	13.11	8.136	0.221			. . .
Horses								
Number of analyses.	5	. .		5	13	. .	.	. .
Mean	1.0082	. . .	. . . .	8.15	1.01	. .	. . .	. .

DISCUSSION OF THE RESULTS.

Physical Factors.—The molecular concentration as determined by Beckmann's method was, in three of my specimens, that of normal serum. This result differs from that obtained by Zanier with Hamburger's blood corpuscle method. According to Zanier the cerebrospinal fluid of the ox is hyperisotonic to the blood serum. One c.c. of the fluid required the addition of 1.3 to 1.35 c.c. of water to produce laking, whilst serum required only 1.1 c.c. It must be remembered in this connection that Hamburger's method is only applicable when the solution to be investigated contains no molecules which can enter the corpuscles. I compared the results of this method with the freezing point in fluids IV and V. In Case 4 5 c.c. of the fluid required 4 c.c. of water to lake rabbit's blood (being therefore isotonic with a 1.1 per cent. solution of NaCl); 5 c.c. of fluid V required between 3.0 and 3.5 c.c. of water to lake human blood (isotonic with 0.98 per cent. NaCl). The determinations were made rather roughly and no comparison with serum was possible. Comparing them, however, with the depression of freezing point (IV, 0.535; V, 0.591) it is seen that the two methods do not yield analogous results. It would seem, further, that something in the cerebrospinal fluid protects the corpuscles against laking. In view of these results, Zanier's experiments need verification by the simultaneous employment of Beckmann's and Hamburger's methods.

The specific gravity varies within narrow limits for all animals and is always lower than that of serum, on account of the small proteid content. The reaction is always slightly alkaline. (According to E. Cavazzani the specific gravity and the alkalinity are somewhat greater in the morning than in the evening.)

The inorganic salts exist in about the same amount as in the serum, and consist mainly of chlorid. The average per cent. of this salt is that of serum. Foreign salts can pass from the circulation into the cerebrospinal fluid, as shown by A. and E. Cavazzani, for potassic iodid and ferrocyanid. This passage is, however, much slower than the excretion into other fluids. The salts can not be detected in the cerebrospinal fluid until after an hour, whilst they appear in a few minutes in the aqueous humor. When salts are injected into the subarachnoid space, their absorption is also very slow, requiring from 20 minutes to two hours. I had opportunity to convince myself of the presence of iodid in the cerebrospinal fluid of a child treated with KI.

Reducing Substance.—The constant occurrence and the nature of the reducing substance of cerebrospinal fluid was long a matter of discussion. Halliburton claimed that it did not reduce bismuth, and that it was pyrocatechin. These statements did not pass unchallenged. Nawrotzki, who gives also the literature of the subject, has finally settled the dispute. He finds no pyrocatechin, and shows that the substance gives all the tests of dextrose. This sugar is present in every freshly drawn specimen of the fluid, but disappears on standing. The statement of Comba, that it is always absent in meningitis lacks confirmation. Its absence in my fluid II is easily explained by the time which elapsed between the puncture and the examination.

Coagulable Proteid.—Halliburton ascertained that this is completely precipitated by $MgSO_4$, and is therefore globulin. The absence of albumin was also confirmed in the case of Thomson, Hill and Halliburton. It was also absent in the two fluids (III and IV) in which I tested for it. This normal absence of albumin in a fluid containing globulin is apparently a unique phenomenon. Panzer claims to have found albumin. It is possible that the presence of this proteid could be due to an admixture of inflammatory exudate, and that it might have a diagnostic value. Further observations are very desirable. The quantity of the proteid varies between rather wide limits, but 17/20 of the analyses show less than 2 per cent. Nawrotzki claims that a high per cent. of proteid is connected with fever. This claim needs further support. Halliburton affirmed the presence of a non-coagulable proteid. This has not been found by other investigators, and none was present in the fluids III and V in which I sought for it. Halliburton's results probably rested on an error of technic. The same author claims that fibrinogen is absent. The membrane in fluid II appears to show that fibrin may be formed, although the quantity of material did not permit positive identification.

Diastatic Ferment.—This may be present, although in less amount than in lymph or serum (E. Cavazzani). Panzer found none. Cavazzani also found an oxidizing ferment, which blues guaiac before boiling. Thomson, Hill and Halliburton found no cholin in their case.

BIBLIOGRAPHY.

E. Cavazzani: Centralbl. f. Physiol., vol. vi, p. 393, 1892. (Analyses of dogs.)

E. Cavazzani: Centralbl. f. Physiol., vol. x, p. 145, 1896. (Analysis of hydrocephalic child's.

E. Cavazzani: Centalbl. f. Physiol., vol. xiii, p. 345, 1899. (Technic of cerebrospinal fistula.)

A. and E. Cavazzani: Centralbl. f. Physiol., vol. vi, p. 533, 1892. (Elimination of ferrocyanid and iodid.)

C. Comba: Archiv f. Kinderheilk., vol. 28, 1899. Clinica Medica, 1899.

Guerbet: Jour. de Pharm. et de Chim., vol. x, p. 59, 1899.

Halliburton: Text-book of Chemical Physiology; Journal of Physiology, vol. x, p. 232, 1889; Proc. Physiol. Soc., 1887, p. 14.

Johne: Z. f. Thiermed: Vol. i, p. 349, 1897. Ref. in Centralbl. f. Physiol., vol. xii, p. 337. (Analyses of horses.)

Nawrotzki: Zeitsch. f. Physiol. Chem., vol. xxiii, p. 532, 1897.

Panzer: Wien. Klin. Woch., 1899, p. 805. (Analyses of two hydrocephalic children's.)

Quincke: Archiv f. (Anat. u.) Physiol., 1872. (Analyses of dogs.)

Papers on lumbar puncture: Verh. d. X Congr. f. inn. Med. 1891; Berlin Klin. Woch., 1891, Nos. 38 and 39.

Rochefontaine: Gaz. Med., 1879, No. 21. (Analyses of dogs.)

Thomson, Hill and Halliburton: Proc. Royal Soc., vol. lxiv, p. 343, 1899; Brit. Med. Jour., Feb. 16, 1899.

Tolson and Lenoble: C. R. Biol., 1891, p. 373. (Analyses of human.)

G. Zanier: Centralbl. f. Physiol., vol. x, p. 353, 1896.

The analyses of the following investigators are also included: Human Fluid: C. Schmidt, Yvon, Quincke, Ricken, Lassaigne, Müller.

CLINICAL OBSERVATIONS IN STOMACH SURGERY.*

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Surgery of the stomach is still in a developmental state. Many surgeons are making progress in this field, and although there can not as yet be many conclusions which can reasonably be expected to be permanent, still it seems worth the effort to exchange the points of clinical experience at this time.

It is, of course, out of the question to discuss this subject thoroughly in the time given to a paper in this Section, but I believe that it will be possible to present the features which seem of greatest practical importance as they have impressed themselves on me in my clinical observations.

Ultimately the greatest portion of stomach surgery must be done for the relief of gastric ulcer or one of its various sequelæ—hemorrhage, perforation, adhesions, cicatricial contraction with pyloric obstruction and its consequent gastric dilatation, hour-glass stomach and carcinoma. The wider my field of observation has become the more I am convinced that there is in this condition a great opportunity for surgical work of the highest value.

The operation for the relief of hemorrhage from a gastric ulcer, introduced by Mikulicz sixteen years ago, which has been practiced by many surgeons, but was brought to the general attention of the surgical profession especially by the clearness and force of Mayo Robson's writings, will become less and less indicated as the practitioners of internal medicine become convinced of the fact that these cases can be safely relieved by a simple operation performed in the interval between attacks.

The same condition will reduce the frequency with which the surgeon will be called on to operate for the relief of perforative gastric ulcer. The statistics of Wier and Foote and those of Tinker will serve to indicate the gravity of this operation, especially when compared with the statistics of Mayo, Finney and others, of operations performed in the interval.

In all cases of ulcer of the stomach which do not heal completely and permanently by internal treatment or in which the healing is followed by pyloric obstruction, it seems proper that surgical treatment be employed. There are three factors which aid greatly in bringing about this conclusion: 1. The diagnosis can now usually be made without difficulty because the attention of the profession has been sufficiently directed toward this condition to make its recognition probable. 2. The operative technic has been so thoroughly perfected that interval operations are accompanied by very little danger. 3. A sufficient number of cases have been observed for a number of years to make the permanency of cure an established fact.

Mayo established the principle of providing perfect drainage of the deformed stomach by making an anastomosis between the very lowest portion of this organ with the jejunum. This is the most important factor which has served to build up a satisfactory technic in this class of cases. Many surgeons operating on the stomach have not yet grasped this idea. This is true especially of the surgeons who have been unsuccessful in this class of work. It should be stated here that in making a posterior gastroenterostomy the surgeon will employ this principle in most cases, whether he does it intentionally or accidentally, but in the anterior operation he is just as certain not to do this, unless his attention is fixed on this end at the time of the operation.

In my own experience the persistent vomiting after gastroenterostomy—"vicious circle"—has been absent since I appreciated this principle and have applied it. The vomiting simply resulted from the fact that fluid could not help flowing into the stomach from the proximal end of the small intestine, because it had to flow down hill, the opening in the stomach not being in the lowest point of this organ. All that has been said and written concerning the cause of this pernicious vomiting, with the exception of what refers to this one condition, is, I believe, based on faulty observation, and all of the complicated operations which have been invented to prevent this vomiting are unnecessary, if the principle introduced by Mayo is properly appreciated and applied.

ELASTIC LIGATURE METHOD.

It is probably of little importance whether the anastomosis is made with ordinary sutures or with those aided by a mechanical splint, like the Mayo-Robson decalcified bone bobbin, or with the Murphy button. In all but thirteen of my cases I have used the Murphy button, in four the needle and thread and in nine the McGraw elastic ligature. All of the latter I have made during the present year, and have found the method exceedingly easy and satisfactory so far as the immediate results are concerned. None of the patients showed any shock. They were all able to sit up in bed on the day following the operation and all recovered. The time which has elapsed since these operations were performed is, however, too short to determine the ultimate result. The points of importance in this method are that as large an opening as desired can be obtained and that there can not possibly be either separation or leakage or infection from the intestinal or stomach contents.

In applying the method the following conditions must be borne in mind: 1. A round rubber cord 2 mm. in diameter, made of the best material, should be used. 2. A posterior row of Lembert sutures is applied. 3. A long, straight needle armed with the rubber ligature is passed into the lumen of the intestine and out again at the desired distance, from 5 to 10 c.m. away from the point of introduction. 4. While an assistant holds the intestine the surgeon stretches the rubber in the needle and when quite thin draws it rapidly through the intestine. 5. The same step is repeated through the stomach. 6. A strong silk ligature is placed across and underneath the rubber ligature between the latter and the point where the stomach and intestine come together. 7. A single tie is made in the rubber ligature after the latter has been drawn very tightly. 8. The silk ligature is passed around the ends of the rubber ligature where they cross and tied securely three times. 9. The ends of the latter are released and cut off, being held by the silk ligature. 10. The Lembert suture is continued around in front until the point of its beginning is reached, where it will be tied. 11. Care must be exercised to prevent tying the rubber ligature too far backward and thus getting behind the posterior row of Lembert sutures.

I am thus explicit in describing the steps of this operation because I find that only those who are thoroughly familiar with the method have used it, and apparently all with great satisfaction.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

It has been found that a gastroenterostomy opening made with a Murphy button will remain open and act perfectly in cases in which the pylorus is permanently occluded, but in cases in which it is only temporarily occluded because of an open ulcer with its resulting induration and edema, the gastroenterostomy opening contracts as soon as the pylorus again becomes normal or nearly so. Unfortunately, this closure of the gastroenterostomy opening is likely to be followed by a recurrence of the ulcer and the consequent obstruction of this orifice, which frequently necessitates a repetition of the operation.

This can be avoided by making an excision of the pylorus at the time of the primary operation or by closing the pylorus with a silver wire passed around the pyloric end of the stomach or the beginning of the duodenum two or three times, drawing it just tightly enough to occlude this orifice completely, but not sufficiently tight to cause pressure necrosis. This method has, however, not been tried sufficiently to secure its absolute establishment.

It is claimed that by making a large anastomotic opening by means of the McGraw elastic ligature one can secure a permanent opening under all conditions. My own cases are still too recent to be of value in confirming this claim. The results secured in cases of the class under consideration by the operation of gastroenterostomy properly performed are certainly very encouraging.

Recently Fowler has described an operation consisting in gastroenterostomy and enteroenterostomy between the portions of the jejunum at the proximal and distal side of the point at which the anastomosis was made with the stomach. Aside from this the intestine is occluded by means of a silver wire passed three times around its lumen between the point at which it is anastomosed with jejunum and the stomach, so that the bile and pancreatic fluid can be emptied into the small intestine, but not into the stomach. This operation has given very satisfactory results in the hands of its author, but in my experience the much simpler method of making an anastomosis between the lowest portion of the stomach and the jejunum has been so satisfactory that I have not found it necessary to make the more complicated operation.

PYLOROPLASTY.

Operations for the enlargement of a contracted pylorus have not been very satisfactory, principally because the obstruction was not fully relieved by the operation usually employed—the Heinecke-Mikulicz or some modification of this—on account of the pouch-like deformity which is present in most of these cases, necessitating the elevation of the food to the level of the pylorus before it can be emptied into the duodenum even after the plastic operation has been made on the contracted pylorus.

One year ago Finney published a method which seems to promise well, but it has not attained sufficient age to have stood the practical test of time. I have employed this method but once, making use of the McGraw elastic ligature instead of making the horse-shoe shaped incision.

Theoretically this is a good operation and practically it can be performed with great ease. It will be interesting to observe the permanent results in the cases which have been operated on by this method during the past year.

In many cases a very moderate pyloric obstruction will give rise to most distressing symptoms because it is accompanied not only with a pouch-like deformity of the greater curvature of the stomach, but because at the same time gastroptosis is present. Thus the normal drainage of the stomach is interfered with mechanically in three ways: 1. By the constriction of the pylorus. 2. By the deformity. 3. By the malposition of the organ.

In simple enteroptosis a number of authors claim great benefit to the patient from various operations intended to elevate the organ. Most of these methods interfere seriously with the mobility of the organ and are painful, for a time at least.

This is not the case with the method described and practiced by Beyea, and that devised independently by Bier. These methods are very similar and virtually consist in shortening the gastrohepatic and gastrophrenic ligaments by means of several rows of fine silk sutures.

Experience seems to show that this method gives permanent relief in simple gastroptosis, the pain disappearing quickly and permanently, and the patient gaining rapidly in weight and strength. Whether this method is applicable to cases such as I have described remains to be seen by experience.

I have operated on but two of these cases by a method similar to those mentioned above, but which at the same time fixed the stomach to the abdominal wall. The results were so unsatisfactory, although in each case I could note some improvement, that I did not repeat the operation.

Since studying the methods described by Beyea and Bier, it seems plain that the interference with the mobility of the stomach prevented the complete recovery of my patients, and that with better technic the results would have been better.

OBSTRUCTION OF PYLORUS DUE TO CARCINOMA.

In carcinoma of the pylorus there is never any indication for performing a complicated operation similar to that described by Fowler in connection with gastroenterostomy, because the pylorus is permanently obstructed at the time of the operation, and this obstruction becomes more complete as time progresses.

In cases in which the tumor is sufficiently circumscribed to make its removal practicable, there is again no occasion for performing any operation except an anastomosis between the remnant of the stomach and the jejunum. It is, however, important to select a point sufficiently distant from the point at which the duodenum passes through the mesocolon to avoid all tension. The operation is very simple if performed after a definite plan.

The duodenum is clamped double after tearing a small opening through the folds of the omenta above and below. It is then severed between these clamps. A circular silk suture is applied to the end of the duodenum, and while this is tied the crushed end is inverted into the lumen of the intestine. A few sutures will serve to cover this circular purse-string suture and complete the closure of the intestine. Then the greater and lesser omentum are caught successively, always between two pairs of forceps, care being taken not to injure the pancreas behind the duodenum to the right and the vessels supplying the colon below.

In this manner any desired portion of the stomach or the entire organ can be removed without causing any considerable amount of shock or the loss of much blood. When a safe point has been reached beyond the growth, two pairs of clamp forceps are again applied and the same steps repeated that were described in connection with the duodenum. Instead of applying a purse-string suture, however, it is best to apply a simple glover's stitch, grasping the stomach wall to either side of the clamp forceps, and passing loosely across the latter. When the entire row of sutures has been applied, the forceps are loosened and the suture drawn tightly. This serves to insert the crushed end of the stomach into its lumen. Then a second row of continuous Lembert sutures is applied over this row, leaving the stomach in the form of a closed sac. An anastomosis is now made between the remaining portion of the stomach and the duodenum, preferably by means of the Murphy button. At this point it is of the greatest importance, first, to choose the lowest point of the stomach; second, to select a portion of the jejunum which is sufficiently free to prevent all tension.

Of course, in cases in which it is not possible to remove the entire tumor, it is much better for the patient if only a gastroenterostomy is made to give temporary relief from the pyloric obstruction.

It should be stated here that occasionally a carcinoma will be found which is apparently perfectly movable, but which is found later to have invaded the pancreas, the latter organ being attached to and moving with the stomach.

GASTRECTOMY.

Complete gastrectomy, although it is now a recognized operation, must always remain rare, because cases in which the disease is sufficiently advanced to require this operation are usually so far advanced that the operation is useless. When indicated, the steps which have just been described are simply to be carried further until the entire organ has been removed. Here again, it is of the utmost importance to unite the esophagus to a loop of the jejunum, sufficiently loose to prevent tension.

I have never removed the entire stomach, but in two cases of partial gastrectomy so small a portion of the cardiac end of the stomach could be preserved that I virtually had an opportunity to test this method. It is very simple, and I believe it must be ordinarily, at least temporarily, successful in cases in which it would be indicated.

In all of these operations there are a few points of great practical value, concerning the preparation of the patient and the after-treatment, which are not generally appreciated and which are consequently worthy of mention in this paper.

Many of these patients entered the hospital in an extremely emaciated condition, because almost always milk is the only food which has been given for a considerable period of time. The stomach contains a quantity of residual decomposing material and the milk which is taken is at once changed into a similar decaying substance, from which it is, of course, impossible to secure any nutrition, even from the portion which may pass the pyloric obstruction into the intestine. If the stomach is carefully irrigated with warm normal salt solution through a large-sized stomach tube before food is given, every three to six hours, the conditions for obtaining some benefit from the food will be greatly improved. In most cases the use of an ounce of one of the various concentrated liquid predigested foods in the market, given in three ounces of normal salt solution after making gastric lavage every three to six hours, will be followed by rapid improvement in strength. In this manner the absorption from the stomach of products of decomposition will be prevented, and for this the absorption of at least a small amount of concentrated food will be substituted. It is best at first to spray the pharynx with a 4 per cent. solution of cocain and to permit the patient to swallow a little of this rather than to wait for five minutes before introducing the stomach tube. This will prevent unnecessary gagging and discomfort of the patient.

It is well to introduce through the stomach tube into the stomach once a day, or less frequently, after the lavage, two ounces of castor oil or olive oil and then to withdraw the tube. Unless the pylorus has been entirely occluded the oil will find its way into the intestine and will aid the nutrition of the patient.

It is well to place these patients on nutrient enemata at the same time. One ounce of one of the liquid predigested foods in the market, dissolved in three ounces of normal salt solution and introduced through a soft rubber catheter which has been inserted a distance of two to three inches, seems to be of the greatest value.

In case the patient is nauseated after the operation, gastric lavage should again be employed at once. If the patient has been accustomed to the use of the stomach tube before the operation, it is, of course, a great advantage to him after the operation.

It is important to use only a small amount of water in making gastric lavage after the operation for fear of disturbing the healing of the wound in the stomach. We introduce but half a pint at a time. Neglecting this precaution caused the death of one of my patients.

Rectal feeding should be continued for two weeks after the operation, but small amounts of predigested liquid nourishment may be given every three hours by mouth after the fourth or fifth day in most cases.

I have reviewed the histories of the cases on which I have made stomach operations at the Augustana Hospital, and find that in seven cases gastrostomies were made for the relief of obstruction of the esophagus; one of these was made for the purpose of dilating a benign stricture, one for the purpose of feeding a patient who had been starved to a mere skeleton because of the presence of a diverticulum which had completely occluded the esophagus. The former case recovered, the latter died of exhaustion. She was in an almost hopeless condition when she entered the hospital. Of the five remaining cases operated on for obstruction of the esophagus due to carcinoma, three recovered and two died of exhaustion, being in a hopelessly starved condition when admitted.

Two cases operated on for perforation of the stomach, one due to ulcer, the other due to gunshot wound, both died from diffuse peritonitis which was present at the time of admission. In each case the perforation had existed for eighteen hours and the abdominal cavity was full of food and a thin cloudy fluid.

There were nine pylorectomies and incomplete gastrectomies with three deaths, one from shock two hours after the operation, one from overdistension of the small remnant of the stomach with fluid during gastric lavage after the patient had been normal for four days. The lavage was ordered because the patient was slightly nauseated and the nurse misunderstood the order in regard to the quantity to be used at a time. The third case died as a result of loosening of a Murphy button on the seventh day. The patient was badly nourished, and it is likely that union was retarded.

In the first of these three cases a gastroenterostomy should have been made, because the patient's condition was greatly reduced on account of the complete obstruction of the pylorus by the carcinoma, but the tumor seemed so completely confined to the stomach that it seemed as though its removal might result in a permanent cure. In the second case, the death was plainly due to an accident, which could have been avoided. In the third case I believe that my technic was at fault.

There were seventeen gastroenterostomies for the relief of non-malignant obstruction of the pylorus. Of these sixteen recovered and one died. The latter was a patient 74 years of age, greatly reduced in strength, with an almost complete cicatricial obstruction of the pylorus. Her death was due to exhaustion.

There were also twenty-one gastroenterostomies for the relief of pyloric obstruction due to carcinoma in cases in which a complete excision of the tumor was not possible. Of these twenty recovered and one died from exhaustion. The patient was greatly reduced on account of an almost complete obstruction of the pylorus. He was 65 years of age. The autopsy showed perfect healing of the anastomosis and there was no peritonitis.

During the same time I have operated on a number of cases at two other hospitals, but I have not had the necessary time to review the histories of these cases, and consequently this paper was based on the observations made in the study of this series of fifty-six cases.

Regarding the immediate results, I would say that the cases of obstruction due to carcinoma experienced great relief, many of them being not only freed from pain and nausea and vomiting, but gaining very greatly in strength, and almost all expressed their great appreciation of the benefits of the operation. The ultimate results in these cases will be reported later.

In the non-malignant cases I think that there has been great benefit in almost every case. The ultimate results will also be reported later.

It is likely that a larger experience will modify many of the opinions expressed in this paper, and it is not intended that it should carry great weight.

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DISCUSSION

ON PAPERS OF DRS. KNOTT, NILES AND OCHSNER.*

Dr. F. Wyllis Andrews, Chicago—It must be admitted that American surgeons have been backward and that they are following in the steps of the Germans in developing gastric surgery. But, of course, we all know that the world recognizes the excellent pioneer work of the American surgeons in intestinal surgery. The evolution of gastric surgery will take over a large number of men, who formerly treated the cases medically, into the surgical domain. We used to accept those cases when they were sent to us by the interne for operation, which was very rarely. Now we assume that the pathology, symptomatology, etiology and indications for operation belong to our field. There is no more reason why a gastric ulcer should be classed as medical than there is why the same condition on the leg or on the tongue should be considered a medical disease. Dr. Dunsmoor expressed his surprise and disapproval that so many surgeons were willing to enter on operative work in the lower abdomen, and were so much afraid of the work above the umbilicus. I remember reading the statement by Dr. Willoughby Furness that the proximity of the solar plexus made surgery in the upper abdomen more dangerous from the standpoint of shock. Now this false conservatism or timidity deters operators in this field, but when you consider the anatomy you will find that it is easier to repair the stomach walls than it is to do the same in one of the small intestines. It is a fertile field for the operator. What are the indications for operative interference in stomach disease? The indications are not simply existence of chronic stomach disease, whose nature we can not determine. I think the trend of modern surgery is in this direction: when we have a case of chronic stomach trouble we operate for diagnosis. How many times a dyspeptic patient will be operated on, say for hemorrhoids, then sent to some specialist, who will remove an ovary; then you may send for some one who will anchor a floating kidney; then for some one, who in despair will remove the appendix; and after all this the patient comes back to you as bad as ever. But if the patient had been sent to a surgeon who would have performed a gastroenterostomy in the first instance, you would have cured the case. Dr. Ochsner spoke of a number of cases in which he had operated for pure gastric pain. Probably he now performs a gastroenterostomy on all cases of obscure gastric pain and cures a large proportion of them. Now, I think we must all recognize that the chain of disorders, beginning with ulcer and ending in stenosis or carcinoma, we have the same indication for early operation that we have in other abdominal conditions. There is frequently the case of the gastric ulcer, running over a period of pain, vomiting and hemorrhage, and later producing carcinomatous degeneration of the healthy tissue. Dr. Bevan has reported a case of pylorectomy for the removal of pyloric carcinoma, which commenced in ulcer of the stomach. Dr. Niles traced in his paper the history of a carcinoma of the pyloric end of the stomach, beginning, as you will find nearly every one of them, in gastric ulcer. Surgery must recognize the clinical continuity of these factors ending in carcinoma, and must operate more often in the ulcer stage without waiting for perforation, hematemesis or malignant obstruction.

Dr. William J. Mayo, Rochester, Minn.—The surgery of gastric ulcer at this time is really the surgery of its complications. This is shown by the first two papers that were read to-day in regard to stomach adhesions, pyloric obstruction, hemorrhage and perforation. It is not the gastric ulcer which we have been operating for; it is the complications of the gastric ulcer. We must keep this very clearly in mind. What are we going to do with the cases we see before the complications arise? This is a part of the subject which must be cleared up. The ulcers which produce the complications are usually in the pyloric end of the gastric cavity. The pyloric part of the stomach is the muscular part, and it is on this side that we not only get the gastric ulcer, but at least 60 per cent. of all the gastric cancers, and it is altogether probable that many have their origin in ulcer. We can not usually excise these ulcers, as they are often multiple. I have searched for a bleeding ulcer half an hour and been unable to find it, although the patient had a severe hemorrhage three or four days before the operation. The pyloric obstruction is a complication of gastric ulcer, but the ulcer is there long before you get the obstruction; so that operations on the pylorus can not cure the condition, because the ulcer does not depend on obstruction, and in many of the cases the ulcer is beyond the pylorus in the duodenum, and after plastic operations, which are intended to cure the ulcer by enlarging the pylorus, the food must still pass through the ulcerated area before it reaches the bowel.

Gastroenterostomy is the most satisfactory operation for ulcer, as it drains the stomach at a point to the left of the ulcerated portion, and if the pylorus be obstructed the cure will be permanent; but if the pylorus be open, as soon as the ulcer heals the spasm relaxes and the food passes down through the pylorus again and the fistula contracts, and relapse may occur. In such cases resection of the pyloric end of the stomach or the ulcer bearing area will be best, as recommended by Rodman.

Just a word in regard to cancer. Our only reasonably satisfactory operations for this condition have been extirpation. The operation for pyloric growth usually is not difficult, and by removing all of the lesser curvature the pylorus and the body of the stomach to the left gastroepiploic vessel, all of the lymphatics will be removed and the remaining portion of the stomach may be expected to remain free, as it is isolated from the pyloric end by reason of a separate vascular and lymphatic arrangement. In 27 resections of the stomach for cancer, 5 died from the operation, one died later from another cause; but of the 21 that recovered, the average length of life was over a year, one living over three years and two alive and well over two years.

Dr. Carl Wagner, Chicago—Three cases of so-called inoperable carcinomatas, which have occurred in my practice, come to my mind. The most important one afflicted a woman aged 53. She was emaciated to a skeleton and had a tumor of the size of a fist in the stomach region, which first appeared about a half year previous, growing steadily since. The patient presented all the symptoms of carcinoma of the stomach, such as the presence of lactic acid, absence of muriatic acid, emaciation, vomiting and pains. Several surgeons were consulted, who all concurred in the diagnosis of inoperable carcinoma of the pyloric end of the stomach. The patient had another tumor in the inguinal region, below the Poupart ligament, also the size of a fist, which was diagnosed as a lipoma, and, of course, not brought into any connection with the tumor visible in the stomach region. When she came under my care I also was of the opinion that I was confronted with inoperable neoplasm of the stomach, and took therapeutic measures accordingly, until one day I recollected a case of my former experience, where I found, with an exploratory laparotomy, a fatty tumor, originating in the ligamentum teres, hepatis suspensorium and overlying parts of liver, stomach, gall bladder and part of ascending and transverse colon, which caused a condition similar to that presented in the present case. Thus I resorted to an exploratory laparotomy also in this case.

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* The papers of Drs. Knott and Niles appeared in The Journal of May 23.

The tumor, which the operation exposed, consisted mainly of omentum, which had converted part of the stomach, colon transversum, liver, gall bladder and the corresponding parietal peritoneum, through exudates and adhesions, into one solid, unique mass. It could be removed very readily, in spite of a few difficulties, and careful examination showed otherwise absolute normal conditions of the organs involved. There were no signs of old ulcer cicatrices in the stomach in spite of the fact that such could have been suspected to exist on account of pains, which the patient stated she had suffered during nineteen years previous to the first appearance of the tumor. This latter misled the physicians to conceive the theory of ulcer, cicatrix and subsequent carcinoma, just as in [illegible]

I closed the abdomen, somewhat disappointed at not having found any explanation for the development of the inflammatory condition of such grave bearing on the whole organism. However, when I proceeded to extirpate the alleged lipoma, which, as above stated, was located at the region of *the fossa ovalis femoralis, everything became clear to me.* After freeing it from its covering, it unfolded itself just like a lipoma arborescence, such as we find in the knee joint and with a pedicle as thin as a lead pencil entering into the femoral canal in the peritoneal cavity. On traction it proved to be in connection with the omentum and represented an elongated end-piece of it, which had slipped through the femoral ring in the form of a femoral hernia out of the abdominal cavity, and developed outside of the femoral ring into this large tumor.

The weight of this extra abdominal tumor caused, with every motion, especially when walking, a pulling, jerking sensation at the insertion point of the large omentum, namely, at the large curvature of the stomach, and thus produced intense pains. In the good old German style, hot plates, hot poultices and all kinds of other counter-irritants were applied frequently to the stomach region, during years, with the result that in time local peritonitis, with adhesions and exudate masses, developed. Seven years have elapsed since the operation and the woman is still enjoying very good health. Consequently, the alleged inoperable carcinoma of the stomach, which had reduced the patient to skin and bones, and, undoubtedly, would have terminated her miserable existence within a few weeks on account of marasmus, was no carcinoma at all.

This case serves as an excuse for a plea for greater frequency of exploratory laparotomy in such so-called absolutely hopeless cases of inoperable carcinoma of the stomach.

Dr. William L. Rodman, Philadelphia—There is no more important subject at the present time than gastric surgery. Here in America we have been a little slow in moving along in this direction. I think that Dr. Mayo admirably summed up the situation when he said that the surgery of the stomach is principally the surgery of the complications of ulcer rather than the first ulcer itself. I think we should always keep in mind that it is the complications resulting from gastric ulcer that require operations on the stomach. Therefore, as he says, the real question is as to what to do with the gastric ulcers, if they can be diagnosticated sufficiently early to render excision possible. There is no doubt that we will come very early to the excision of the ulcers before complications take place. It has already been done in an increasing number of cases year by year, and I feel that in time the treatment of gastric ulcer will be partial gastrectomy, and that the mortality will not be more than 5 or 10 per cent. Taking all the early operations done during the past fifteen years, it has not been more than 15 per cent., and surely at the present time it should not be more than one-half of that.

I would like to call attention to one point that Dr. Knott did not refer to in his paper. These adhesions between the anterior wall of the stomach and the abdominal parieties, which would seem to be easy and safe to break up during the operation for gastric ulcer, do not always prove so. Thus, Hofmeister has said that adhesions should always be picked apart very carefully, having in mind not only the possibility, but the probability of tearing into the wall of the stomach itself.

On one point I would rather differ from Dr. Niles. He speaks of the inadvisability of excision in a majority of instances because of the fact that multiple ulcers may exist. That is true undoubtedly in many instances, but it does not occur sufficiently often to deter one from doing a partial gastrectomy if there is a well marked tumor, and it may occur even in benign as well as malignant disease. Even if the small ulcer is overlooked, no harm is done. We must remember always, as Dr. Niles and Dr. Murphy and Dr. Ochsner have said, that there always is a marked tendency to the development of benign disease in the stomach, when there has been chronic disease. Some go so far as to make the statement that at least 50 per cent. of all gastric ulcers go on and develop into carcinoma, and we must all admit that a great number do, and it is for this reason that partial gastrectomy, which is not much more dangerous than gastrojejunostomy, is of much more value. I also wish to say with Dr. Ochsner, that we owe a great deal to Dr. Mayo in perfecting anterior gastrojejunostomy. There is no doubt that the anterior operation will closely rival the posterior method, and there is no more reason why the vicious circle should occur when the anterior operation is done, than when the posterior is performed. Personally, I have always employed the latter operation. It seems to me to be the most anatomic, and the majority of writers prefer it to the anterior. The anterior operation is of so much advantage early in the breaking up of these adhesions, that if it can be done without the vicious circle (and I believe it can), it will certainly be used far more in the future than it has in the past. I have no doubt that it is very important that the lowest point on the wall of the stomach be selected, where drainage can be easily established, and in that manner I am sure that the vicious circle will be avoided. I believe that with the operation as performed by Dr. Mayo, or by Dr. Van Hoeker, there will be in a certain number of cases the vicious circle, but these cases must be subsequently met by entire anastomosis.

Dr. A. H. Cordier, Kansas City, Mo.—If we could locate the position of the ulcer, on first thought it would seem advisable to excise it, but when we take into consideration the pathologic changes, the difficulty of locating the ulcer at the time of the operation, the inability to define its limit, the numerous vascular adhesions to surrounding organs and the slowness with which scar tissue heals, this idea is then dispelled and some other procedure suggests itself that would be equally efficient and less dangerous. This operation I believe to be preferably gastroenterostomy. I have performed a number of these operations. The majority of them have been performed in the anterior wall of the stomach. In none of my cases have I had any trouble from the so-called vicious circle. It is very essential that the opening in the stomach should be at the most dependent point. This feature of the operation I called attention to some eight years ago. Many of these cases at the time of the operation have been erroneously diagnosed as malignant, and even during the operation the indurated mass surrounding the side of the ulcer has been misleading.

TUBERCULAR GLANDS OF NECK AND OTHER LYMPHATIC ENLARGEMENTS.

There were five cases of tubercular glandular enlargement of the neck which occurred in cases with distinct tubercular history. Three were absolutely inoperable, because of the extent of the glands involved, and two had recurred after operation.

Case 2.—The first was a male, 21 years of age. He had been operated on five times in five years. The glands enlarged in February of each year. He was referred to me by the surgeon under whose care he had been. At this time glands had developed in the wound of the last operation before healing had taken place, with other enlarged glands on both sides of the neck; two were discharging sinuses, and there were ugly scars from previous operations. After a few weeks' treatment with the ray, the glands emptied completely, wounds healed promptly, sinuses closed and scars of five different operations were almost completely carried away and bleached the color of the normal skin. The patient has passed his critical season; this year (the first time in five years) absolutely free from any recurrence.

Case 3.—Another operable case was that of a female, aged 24, suffered with a discharging gland, also an ugly scar, attached to the hyoid bone and made more conspicuous by the motion in swallowing. After six irradiations, a strap of adhesive plaster was placed over the gland and sinus to prevent motion and opening of the sinus. Healing took place in six days. Six months have elapsed since this treatment was given, and there is, as yet, no sign of recurrence.

In the other operable cases, after ten days' treatment the glands were completely reduced.

In the two inoperable cases, the necks have diminished about two-thirds in size and, as they have caused no further trouble and both patients are at work, they do not see the importance of further treatment, so it has been discontinued.

My experience with these cases has been as gratifying as with any disease yet treated. If such glandular enlargements can be slowly emptied in nature's own way, radiotherapy may have the preference over operative interference, removing some of the glands, thereby throwing more work on the remaining ones, which are more liable to become enlarged.

TUBERCULAR JOINTS.

Case 4.—There are two cases under this head which I would like to report. One, tuberculosis of the knee joint, with tubercular history and other tubercular complications. The condition had existed for four years. There was thickening and induration of the joint, distinct rice bodies in a small amount of fluid could be felt. Patient was able to get about for only a short time, when the leg would give out completely.

With intermittent periods of a week, irradiation was continued through five months, when patient was discharged clinically cured; deposits were all carried away, except slight thickening; pain and tenderness completely relieved, and the patient was able to get about all day without discomfort. He had had everything in the way of treatment, except resection.

Case 5.—The other case was one of tuberculosis following an injury to the bones of the hand. Large areas of dead bones could be felt with probe, and there were four discharging sinuses. With irradiation, sinuses all healed, pain and tenderness disappeared and there was fairly good motion. Patient was constantly watched by his surgeon, who was ready to scrape the bone, but this was not necessary.

Dr. John B. Murphy of Chicago reports similar cases, with good results, in tubercular granuloma, or Pott's disease.

One other result in radiotherapy and a condition which has caused probably all of us more or less anxiety is dermatitis or burn.

In many of the rapidly recurrent cases of cancer the best results are obtained by powerful stimulation, even burning if necessary. A year ago I was giving such cases only one short exposure a day, while now I give two shorter treatments daily for a week or ten days. In treating such a patient it is necessary, in fact most important, that he be told at the start what to expect, so that he may be prepared when the dermatitis appears and not be frightened into giving up the treatment and consulting another physician who is not familiar with the action of the ray. The news of a terrible burn soon spreads, and injures your reputation as an operator, when, in reality, the result obtained is the desired one. This case, I am happy to state, was not one of my own, but was referred to me for diagnosis.

The patient was a male, 74 years of age; general health, good; no history of cancer in family, but gave history of blood poison, resulting from the prick of a rose-thorn, on the hand. After acute symptoms of poison subsided, the wound refused to heal, though a similar lesion on the leg healed promptly. He was advised by a surgeon to have the rays applied to the ulcer, then about the size of a half dollar. Long exposures were given, and after the fourth, dermatitis appeared, and lasted a month, with slight improvement in the ulcer. Treatment was resumed, and after the eighth exposure dermatitis again occurred. The hand was greatly swollen, and very painful, with a gradual increase in the size of the lesion and increased pain.

The patient was first brought to me Dec. 14, 1902. The hand was then photographed. The ulcer had no appearance of epithelioma. It looked most healthy, with bright, shelving edges. There were areas of bone and tendon exposed. The condition of the skin about the ulcer was that of dermatitis, broken and parched in appearance. A static production of the ray ten inches from the ulcer produced almost instant irritation. Amputation was advised, and the patient made a good recovery.

Microscopic sections were taken from different areas of the ulcer. These revealed squamous epithelioma, with most unusual increase in the fibrous tissue which the pathologist attributed to the action of the rays and the condition, to him, was a new one.

I deem this case idiosyncratic to the rays. The mildest medication caused instant burning.

There was no sugar in the urine, and from previous history, clinically, it was not an epithelioma.

In conclusion, conditions demanding a long series of treatment with the rays, overstimulation invariably occurs if periods of vacation are not given. It develops in the old and paralytic more quickly than in the middle aged or young. The most gratifying results may be obtained in radiotherapy by the operator who carefully studies his apparatus, the tube he is using and the effect of the ray on his patient; yet, on the other hand, if he neglects this strict attention to every detail, or leaves his work to an inexperienced assistant, disappointment and failure will be the outcome.

DISCUSSION.

Dr. C. E. Skinner, New Haven, Conn.—Dr. Varney's paper and the conclusions he deduces from a clinical experience which accords very closely with all who have been using the x-ray in these conditions are very valuable. There is no point on which I saw occasion to disagree with him, but he did not mention the effect of the x-ray on the healing process in fresh operation wounds. As a rule the x-ray is considered stimulating to fresh wounds, but occasionally we get cases where the action would appear to tend toward retardation of the healing process. Two such have come to my notice. One was an amputation of the breast for fibrosarcoma, where we also removed the axillary glands which were involved. The rays were applied immediately after the operation, and after about four applications the tissues took on a dark appearance resembling gangrene. The rays were immediately suspended and not applied again for two weeks. Meanwhile the clots which had formed under the flaps did not absorb, and it was necessary to take out some stitches and remove them. It took this case three weeks to heal when it should have healed in ten days. Another significant case was related to me by Dr. M. M. Johnson, Hartford, Conn., who had a patient with a carcinoma of the breast, which he rayed for three weeks previous to operation. At the time of operation he observed that blood did not spurt from the arteries as it ordinarily does, but merely flowed, as when a vein is cut. All these facts are significant of the conclusion that the x-ray exercises an influence on the circulatory function whereby the blood supply is lessened, and whether or not we are sometimes going to get into trouble with gangrene when we ray freshly-cut surfaces I think is a problem worth bearing in mind.

I would like to contribute a little to the therapy of the x-ray by exhibiting some photographs of a case of ichthyosis, occurring on a boy aged 15. When he was two weeks old ichthyosis began to appear and has been present ever since, the areas affected having increased. The case came to the clinic of the Yale Medical School and was exhibited before the New Haven Medical Society by Professor McDonald, the dermatologist of the institution. My assistant in radiotherapy, Mr. William W. Herrick, New Haven, was present at the meeting and saw the case. It occurred to him at once that if the x-ray could influence malignant epithelioma, would it not also be capable of influencing benign epithelioma. Professor McDonald consented to the trial being made and Mr. Herrick rayed one hand while Dr. McDonald treated the other hand with green soap. This treatment was begun about ten weeks ago. Mr. Herrick will report the case in full later on. The credit for the conception of the idea that the x-ray might be of benefit in this case and for the work actually performed belongs to him. But he has courteously permitted me to bring the case to your notice at this time.

The photographs show the conditions before and after treatment. The layers of scales on the hands and feet were half an inch thick. The right hand was rayed, the left hand treated with green soap. The back of the right hand is now perfectly normal, the scales have entirely disappeared from the backs of the fingers and the greater part of the inside of the hand. In the left hand, treated with green soap, no change has taken place except that a small portion of the scales here and there has come off. Another noticeable fact is that where the scales came off of the right hand, treated with the rays, no irritation followed, the skin appeared pink and normal and soft. Where the scales came off from the left hand, by the action of the green soap, the skin underneath was white and presented the appearance of maceration. Immediately after the sloughing of the scales on the left hand the skin which was exposed thereby would harden and crack, and the hand is now rigid. He can not use it because of the pain excited by stretching the hardened cracking integument, while the right hand is perfectly pliable and flexible. Although this case at the present time is more a curiosity than a demonstration, yet the results are significant from a therapeutic standpoint and give ground for the hope that something of use to the sufferers from ichthyosis may be gained in the future from x-ray therapy. I will say in closing that this is the first time within the memory of the patient that any portion of his body which was affected by the disease has become free from the characteristic epithelial accumulations.

DR. JOSEPH ZEISLER, Chicago—This subject was up for discussion a year ago, and without doubt it has been discussed since again and again. I have put myself on record with my personal experiences in radiotherapy in a paper which I read last September before the American Dermatological Association. We are living in a period when we may expect every few months from various observers comprehensive papers such as Dr. Varney's, showing the effect of the rays in all sorts of conditions. Whoever works with the rays will continually develop a justifiable enthusiasm which will prompt him to publish his reports, and I look on the report of Dr. Varney in that light. On the whole I agree with everything he has said, and shall be the last to doubt the results he has reached. I was rather surprised to hear Dr. Varney suggest the removal of the hard edges of an epithelioma with the curette first and the use of the rays afterward. It seems to me this would antagonize the principle of radiotherapeutic measures and would turn patients from the treatment by rays, because they do not care to have a cutting operation done. The fact is, any epithelioma on the surface can be removed by the rays alone without any other measures, if the proper method is pursued. It is by no means a tedious affair. In my experience, which covers perhaps thirty cases of epithelioma of the skin, 13 to 14 applications were always sufficient to remove our epithelioma.

In regard to the cases of acne I would suggest to the Doctor that if he will extend his field of work to all sorts of acne he will be as much surprised at the result as in the indurated variety. The treatment by radiotherapy of all forms of acne has come to be my first choice. The results can not be compared to any other treatment, and it makes the internal treatment of acne almost superfluous.

I quite agree with Dr. Varney as to the difficulties in cases of hypertrichosis. At the same time I have had positive success with several cases, which have now remained free of hair for over a year. No one should undertake to remove hair with the promise that its removal would be permanent. It will return, but by repeated exposures, frequently before the new growth has started up you can keep the capillary blood vessels in a state of paresis, such as is responsible for the loss of hair.

In this connection I would point out one feature we want in future publications of this kind—not to discredit Dr. Varney's contribution but to ward off similar papers in the future. What we want from now on are reports on x-ray treatment after the observation of the respective cases for a year or two. Sometimes we have marvelous effects in psoriasis. I can clear any patch up in three applications, but in a few weeks the psoriasis returns. We want to know under what conditions this treatment offers permanent results. That it offers temporary results we know, but it seems to me that from now on we should only report results which allow us to look back for a period of several years.

DR. L. DUNCAN BULKLEY, New York—I wish to say that I am foolishly enthusiastic about some results I have obtained with this method. A patient in the skin hospital had her foot so affected that it was scraped a dozen times under ether, scraped down to the bone, and it would heal up for a month or two. Everybody who had seen her had tried everything they knew of for her relief, but she was crying with pain, and sometimes she used several grains of morphin, the pain was so great. A dozen or so applications of the x-ray cleared up everything entirely from her feet so that she could at once be up and around the clinic. It was a marvel to me. It exceeded anything I could have imagined.

I think it is interesting to mention our methods as to time, as to distance, as to the revolutions of the machine, and give some idea of the strength we use. This would help us all. I burn some few cases mildly. An epithelioma is better to be burned mildly than not. As to scraping, I think it is desirable, as it saves several applications of the ray.

DR. R. R. CAMPBELL, Chicago—Dr. Zeisler asks for data that have existed some months, and I think I can supply this as regards one disease. I believe I was one of the first to use the x-ray in the treatment of acne and reported some 15 cases in THE JOURNAL of the American Medical Association. Some of these cases have now gone on for almost two years without recurrence of the acne. In all of these cases all treatment other than exposure to the x-ray had been absolutely thrown aside and the action of the x-ray depended on entirely for the results obtained as reported in that article.

There is one disease in which I believe it is imperative to burn, at least in my experience it has appeared so. In three cases of tuberculosis verrucosa cutis which I have treated with the x-ray I could not get a semblance of a result after repeated exposures until I made it a point to burn. After the burn had been obtained the disappearance of the disease was very prompt. In cases of acne, of lupus, of hypertrichosis, I have not found it necessary to burn, nor have I yet produced in any patient a burn in which my efforts were not bent particularly in that direction and in which the burn was sought. As Dr. Varney has said, we must recognize the idiosyncrasies which exist in different people. This is the rule regarding the *x*-ray as well as any other therapeutic agent we may use.

In cases of epithelioma treated with the *x*-ray, which have been operated on—I am speaking of cases of epithelioma which fall into the hands of the dermatologist who finds it necessary to resort to surgical procedures—the time to institute the treatment by the *x*-ray is not after the tissue has hardened, but within two or three days after the operation has been performed. I think that is not only the case in epithelioma, but it is the case in all malignant diseases. In cases of deeper and malignant troubles, however, I question very much the ultimate efficacy of the *x*-ray. We do get temporary results. But it is a question in my mind as to whether or not we promote a metastasis, and when reaction does take place the growth goes on with a rapidity that has been unknown to us after any other procedure.

Dr. G. P. Edwards, Nashville, Tenn.—One point touched on by Dr. Bulkley I wish to emphasize particularly, that is a more accurate technic of *x*-ray therapy. It is the custom of most of us to use our cheaper non-regulating tubes for treating these skin lesions, because they are cheaper and are not so easily destroyed. I think this is a mistake. I think we should know exactly the condition of our tube and what it is doing. In this work we should be able to maintain the same degree of exhaustion for the same class of cases. The variety of effects we are getting in these cases is not so much due to the idiosyncrasy of the case as to the idiosyncrasy of the operator in using tubes of different degrees of exhaustion. It has been my privilege to study this particular point, so when I do get a result I know how I got it.

Dr. A. H. Ohmann-Dumesnil, St. Louis—The important point in radiotherapeutics is technic, also the proper lamp glass, whether hard or soft. I have had a very unfortunate experience in the effects of radiotherapy. A young lady of Memphis, Tenn., was treated by Dr. Lassar of Berlin, and when I saw her she had an *x*-ray burn nearly healed, but with a very thin scar all over the face. She came to me to be relieved of the scar. I have seen a case where the foot had not been covered by lead in which there was an affection of the metatarsal bones. Those are cases I think it is well to speak of with this idea only, not to declaim against *x*-ray therapy, but as a reminder to all to be careful in their technic in every detail in order to avoid such consequences, which are difficult to ameliorate or make completely well, some of them requiring months and months. The case of injury to the metatarsal bones has been of nearly nine months' duration, and the man can not walk with ease yet. This is not encouraging to the use of *x*-ray therapy. You may say it shows great negligence on the part of the operator, but he should not have been negligent, and this part of the technic should not be forgotten.

Dr. J. H. Duncan, St. Louis—I have had considerable experience with the *x*-ray treatment in my dermatologic work, and have had my share of success, not only in new growths, but in ordinary skin lesions. The longer I use the ray the more careful I am in the selection of my cases, and I am afraid if we are not careful before long the dermatologist will be relegated to the *x*-ray specialist, and the real diagnostician, the scientific dermatologist, will have to take a back seat. I hope, then, that we will not attempt to treat all of the skin lesions we come in contact with by the ray, but select our cases and rather use the *x*-ray as an adjunct to other treatment. While we know, for example, that the *x*-ray may relieve permanently a new growth, realizing the length of time it may take to produce that result, I am of the opinion that curettement with the application of a plaster, or some kind of operation, then the healing of the wound by the *x*-ray would not only facilitate matters, but would probably make a more permanent cure. I was, and am, to a large extent, enthusiastic in this matter. I have had success in cases of acne, infiltrated thickened chronic eczemas, hypertrichosis, etc. My experience with the ray has been most gratifying in breast lesions and in the treatment of epithelioma or cancer of the lip. I have had experience in the treatment of a small affair no one has mentioned, but it was a most annoying affection. It was a case of verruca, 30 or 40 warts on the back of the hand. The result in that case was satisfactory. Of course, we would not use the ray for one or two warts, but the entire back of the hand was covered with verruca.

We can all give our experiences in these things, but let us not get too enthusiastic about the *x*-ray to the exclusion of other old and well-tried remedies.

Dr. J. B. Guthrie, New Orleans—There is a little point in *x*-ray technic that I worked out and subsequently found mentioned, but no details given, in Williams' work. The feature of the method I refer to consists in the simultaneous use of two or more *x*-ray tubes connected to the same generating source, coil or static machine, as the case may be. I have found this procedure of especial value in the treatment of cutaneous lesions when, as is often the case, they are widely disseminated or located on opposite sides of the face, rendering treatment by a single exposure impossible. Where two tubes are run at the same time two exposures of the same patient are rendered unnecessary, for all of the diseased area receives treatment at the same time.

I have a tube stand with arms of the usual double-jointed type with two arms instead of one. Each of these arms carries a tube which is connected to the proper terminal of the machine. If we call the tubes A and B, the connections are as follows: The cathode of tube A is connected to the cathode of the generator, and the anode of tube B is connected to the anode of the generator. The anode of tube A is then connected with the cathode of tube B by a piece of flexible wire. This puts the tubes in series, and connected in this way each tube takes the current it needs and allows the excess to pass on to its fellow. It is not essential that both tubes be of the same vacuum, although the tubes operate best when this is the case. A high tube and a low one will both glow provided that the aggregate resistance of the tubes does not exceed the sparking capacity of the generator. It is necessary to use a spreader that is long enough to prevent sparking across from one wire to another. When only one of the tubes is to be used the other is short-circuited by connecting both wires leading to it to one terminal. It is sometimes desirable to have a high tube and a low one on the stand. Then when one tube is in use the other swings out of the way.

The device I have described has been very useful to me, and I consider it a time-saver. I have never utilized it to treat more than one patient at a time, but this is possible. It is most useful in skin work for the reasons I have named. I mention it with the hope that some of the members of this Section will find use for it also.

Dr. J. N. Roussel, New Orleans—I want to suggest the use of oxygen in the treatment of parasitic skin diseases by the *x*-ray. In my experience oxygen in spray, which we might obtain either by means of a bag of oxygen or the static breeze, accelerates the action of the ray materially in the treatment of ringworm and sycoses.

Dr. H. R. Varney, Detroit—In reply to Dr. Skinner's inquiry as to the action on the normal tissue, I would state that as far as I have been able to determine it is a specific cell stimulant, producing a stimulation that is characteristic in itself, an inflammation that exists for days and weeks, and even months.

In answer to Dr. Zeisler regarding the scraping of the hard epithelial border, I do that in cases where they wish to gain time. I hope I have not appeared too enthusiastic; Dr. Zeisler's criticism is a timely one. In my paper I have reported only one case that has occurred in my work since the first of January. I have been operating for two and a half years and have given about ten thousand exposures.

I believe I mentioned verruca in my paper. I have had some very interesting cases in that line with very gratifying results. They, of course, sometimes disappear like magic with no treatment, yet are troublesome in certain localities. The multiple tube I have never used, but can readily see that in acne and other conditions we would gain time with it.

Dr. Bulkley's *suggestion* for more knowledge regarding would be of great value to us all technic in this line of work would be of great value to us all if it could be given with some definite rule; but as operators, we all know that there is no definite dosage in giving the ray, as no two tubes produce the same ray; no two patients react the same to the ray; nor does the disease under treatment. Therefore, each operator must, to be successful, establish his own technic, by carefully studying his apparatus, the tube he is using, the patient under treatment and the disease being treated.

CLAMP FORCEPS FOR REMOVAL OF NASOPHARYNGEAL TUMORS.*

E. FLETCHER INGALS, M.D.

CHICAGO.

The report of the following case is made to illustrate the advantage of having a suitable clamp to aid in the removal of nasopharyngeal tumors by the galvanocautery and to call attention to an instrument which I believe will be found advantageous in very many cases. It would also aid in the removal of some growths by the cold-wire snare.

The patient, E. J., a young man 22 years of age, had been troubled with partial occlusion of the nares and the necessity for frequently clearing the throat for about five years. Latterly, there had been complete occlusion of the left naris, but the right was permeable a part of the time. There had also been frequent bleeding of the nose. The patient's personal and hereditary history gave no clew to the cause of the trouble. The thoracic signs were normal. On examination of the nares I found the right side three-fourths closed by swelling of the inferior turbinated body; the left side was free at its upper and front part, but was completely closed posteriorly by a growth in the nasopharynx.

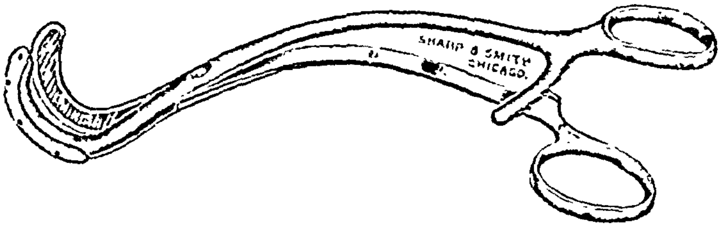
On rhinoscopic examination, I discovered a fibrous tumor with a broad base attached to the vault and posterior part of the nasopharynx, measuring about 1½ inches in length, and about ¾ of an inch in its other diameters. This growth three-fourths filled the nasopharynx. Its surface was smooth and marked by several enlarged blood vessels. It was hard to the touch and firmly attached, with but a slight groove at the lower part between the tumor and the pharyngeal wall, so that a wire could not be made to hold.

The left naris and the nasopharynx were anesthetized as thoroughly as possible with cocain and through the left naris I passed into the nasopharynx and brought out at the mouth, a No. 5 soft male catheter, both ends of which were then held to the left. A similar catheter of different color was next passed through the same naris in like manner and both of its ends were held to the right. The two ends of a long No. 20 platinum wire were then introduced into the ends of the catheters that came out of the mouth and passed back until they came to the turn in the nasopharynx. The catheters were then drawn out through the nostril until the ends that protruded from the mouth were out about four inches nearer to the lips. This caused the wire to make the turn in the nasopharynx, after which both ends were easily pushed in until they came out of the catheter through the nostril. I then passed the clamp-forceps through the mouth, into the nasopharynx and crowding upward and backward grasped the tumor firmly and locked the clamp on its base. Next the loop of wire protruding from the ends of the catheters out of the mouth was carried under the handles of the forceps and drawn back into the mouth so that it must of necessity slide up behind the blades. The catheters were then removed, the wires being carefully held so they could not become crossed in the naris. Next, these wires were slipped through the tubes of a galvano-cautery ecraseur and the electrode and wires were made fast to the handle. The loop was now made tight on the tumor by turning the rachet on the handle.

I then told the patient that as we burned off the tumor it would necessarily cause pain, but I wished him to stand it as long as he could, and that I would cut off the current the instant he requested it. With this understanding, the current was turned on, the loop heated and allowed to burn into the tumor for about three seconds when at the patient's signal the current was cut off. He was allowed to rest for a minute or two and then the current was again turned on in the same way, the rachet being tightened in the meantime. Thus I proceeded burning into the base of the tumor about a sixteenth of an inch at a time until it was completely cut off, without very great discomfort to the patient and without hemorrhage.

In this case the clamp was of signal service because it would have been impossible to engage the tumor in the galvano-cautery loop without it. I believe that the instrument will greatly facilitate the removal of many of these tumors and will make the operation more thorough, even when they might be removed without it, for with it the tumor can be secured at once and the loop of the snare, when carried under the handles and drawn back into the mouth, must necessarily engage the base of the tumor.

The nasopharyngeal clamp forceps has the general form of Loewenberg's nasopharyngeal forceps. The blades, however, are longer and much more curved. The curved portion, which is two inches in length, is so shaped as to accurately fit the vault of the pharynx in the ordinary adult; each blade is protected at the back and outer side by a piece of ivory, so that a short circuit will not be made when the galvano-cautery snare is applied, and the roughened faces of the blades are each provided with four short sharp spikes to prevent slipping. When the instrument was first made the curve was not so great as at present and the blades were not provided with the spikes. I found that it did not accurately fit the vault of the pharynx, and furthermore, that it would slip when the tumor was grasped. The present form appears to meet the conditions perfectly. The handles are provided with an arrangement for locking, similar to that used with many other forceps.



Author's clamp forceps for removal of nasopharyngeal tumors.

34 Washington Street.

Sudden Blindness After Paraffin Injection.—Dr. Lee Maidment Hurd reported to the Section on Laryngology and Rhinology of the New York Academy of Medicine on May 27 a case in which there had been instant loss of vision following a paraffin injection for nasal deformity. The patient was a man of thirty-three years without any history of syphilis, whom he had given, some months previously, two or three injections of paraffin with the object of improving a nasal deformity. The man returned requesting another injection, and while this was being given he became blind. Ophthalmoscopic examination revealed the typical appearance produced by embolism of the central artery of the retina. While the possibility of this accident being a mere coincidence was freely admitted, the opinion seemed to prevail that it was directly connected with the paraffin injection. The blindness is permanent.

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LECITHIN AND ITS THERAPEUTIC USE.

Although lecithin is a constant constituent of all kinds of cells, and therefore an ingredient of all foods, the manner in which it is absorbed and utilized is unknown. Its constancy in the cells, both of animals and plants, and the large amounts that exist in the central nervous system, are sufficient evidence that it must play some important part in life processes, but what these are is little more than surmised. On the other hand, its composition, although very complex, is well understood. Shorn of technicalities it is a fat which has had one of the three fatty acid groups replaced by phosphoric acid, to which is attached a nitrogenous body, cholin. It is the presence of this last group that makes the substance of particular interest, for the body cholin, although not very toxic itself, is easily converted into an extremely poisonous substance, neurin. It may also be oxidized into a very poisonous body isomeric with muscarin. The changes that lecithin undergoes when taken into the alimentary tract are far from clear. That it is absorbed in the same manner as other fatty bodies is possible, but, on the other hand, the presence of the cholin-phosphoric-acid group may cause it to behave in an entirely different way. In other words, it is not known whether the lecithin that is found in the tissues comes directly from the food, or is built up by the cells where it is found.

As to its functions, the nature of its composition suggests that it is not merely a source of energy, as are the fats, but rather that it plays an important rôle of some kind. For this idea speaks also the fact that it is most abundant in the brain and in egg yolk. The significant fact that the substances that act as anesthetics are those in which lecithin and fat are soluble, as chloroform and ether, led Hardy to build up his theory of the importance of lecithin in the conductivity of nerve impulse. When the lecithin is dissolved by the anesthetic, or at least has its physical condition altered, the nerve fibers can no longer transmit impulses; when the anesthetic has been eliminated the lecithin returns to its ordinary conditions and nerve function is restored. In another direction its importance has been shown by Kyes. He found that red blood corpuscles contained something that acted in the same way in causing hemolysis as did the important and mysterious "complement," and later it developed that this active constituent of the red corpuscles was lecithin. The greatest importance of this observation lies perhaps in this, that we have at last a definite body of known chemical nature and structure that plays a part in the reactions of immunity. And this, we may say, comprises practically all we know of the functions of lecithin.

It is quite possible that there are some harmful conditions brought about by lecithin through the toxicity of the nitrogenous bodies that it yields on decomposition. Nesbitt has demonstrated that cholin, and probably neurin, are produced in the intestinal canal during the fermentative processes of intestinal obstruction in animals fed on yolks of eggs. Therefore, it may well be that the lecithin of food is an important source of the poisons that are responsible for intestinal autointoxication; for there are few substances more poisonous than neurin, and 0.5 gram of the cholin is a fatal dose per kilogram of rabbit. When nervous tissue is destroyed lecithin is decomposed to a marked degree, as Mott has shown, and it is possible that with great nervous exhaustion there may be some intoxication with cholin and neurin derived in this way. A resemblance between the symptoms of neurin poisoning and those of the intoxication of fatigue has been observed by some.

With such a fragmentary knowledge as this of the metabolism and uses of lecithin it is evident that the recent development of therapeutic administration of lecithin is not altogether the result of applied science. Rather, the use of lecithin is suggested by the facts at hand, and the rest is empiricism. The greater part of the experimental work has been done by the French, and numerous reports can be found in the Comptes Rendus de la Societé de Biologie of the past year or more. They generally state that young animals fed with lecithin greatly outweigh the control animals; also, that animals infected with tuberculosis and given lecithin, either by mouth or subcutaneously, live longer than the controls. As yet there seem to be too few clinical observations to warrant the drawing of conclusions. The use of glycero-phosphates, which has long been tried, is, of course, based on the presence of this radical in the lecithin of the nervous system. A great many preparations of lecithin are being placed on the market, and we desire to call attention to the following points: First, that there are a number of different sorts of lecithin, depending either on the kind of fatty acid radical that enters into the molecule, or, as W. Koch has shown, on the nitrogenous complex which varies in different lecithins. (Koch has proposed the name *licithan* for the group.) Therefore, if one's observations are to be valuable it is well to know at least the source of the lecithin employed. Secondly, that in such foods as calves' brains and yolk of egg we have a rich supply of lecithin in a natural condition. Walther has found lecithin in the chyle of the dog, so it is probable that some at least is absorbed, but there is no evidence that the methods used for extraction increase its absorbability. Undoubtedly a good way to administer lecithin, if not the best, would be by modifying the dietary. And, lastly, that the ingestion of considerable quantities of lecithin or of foods rich in lecithin may not be entirely without danger, since at least during intestinal putrefaction, if not under ordinary conditions, highly toxic material may be formed from it.

TOXICITY AND IDIOSYNCRASY.

Nothing is more disconcerting for a physician than to have a remedy that he has given in perfect confidence of its harmlessness produce annoying symptoms or perhaps serious toxic effects. Needless to say there are cases of this kind being constantly reported, however, and only a previous knowledge of the special susceptibility of the patient will absolutely protect the physician from such occurrences in his practice. It is well known, of course, that this idiosyncrasy for certain drugs is often a family trait and, consequently, when certain substances, as quinin, for instance, are prescribed it is advisable to ask if the patient knows of any bad effects that have occurred in near relatives. The number of drugs that may produce untoward and unintended complicating symptoms is growing with the enlargement of the materia medica, and especially with the increased use of synthetic products. Some of the recently reported incidents of this kind, as they may be gathered from Squibb's Ephemeris[1] for the present year, are worth noting. Antipyrin is one of the drugs that is well known to produce unpleasant symptoms. Most of the cases reported, however, are of European origin and serve mainly to show how much larger doses of the drug are employed with comparative impunity than are usually considered advisable with us. Simon and Mahu of Paris report a case of toxic hemoglobinuria, following the administration of antipyrin, but as the young girl had been given 9 grams, nearly 140 grains of antipyrin, in four hours, this is not so surprising. Doses as high as 60 to 90 grains during the day are not unusual on the Continent, however. Professors Curschmann and Zweifel of Leipsic, thoroughly conservative authorities, administer from 2 to 4 grams, 30 to 60 grains of antipyrin in twenty-four hours and obtain with this more satisfactory results in the treatment of the fever of puerperal septicemia than with any other remedy. They not infrequently see the cutaneous rashes peculiar to antipyrin administration in certain patients, but they do not consider these a contraindication to the continuance of the drug.

Certain of the newer synthetic products have come under the suspicion of occasionally producing unfortunate symptoms during the past year. Several reports of this character in regard to heroin have been made. Dr. Campbell of Liverpool, who had been in the habit of using heroin hydrochlorate in doses of one-sixth of a grain with great satisfaction in the treatment of laryngeal cough, recently had an alarming experience with a twelfth of a grain dose. It has been found that heroin may produce a habit for which the name heroinomania has been coined, so that recent suggestions for its use in the treatment of morphinomania will have to be taken with great caution. Aspirin, a new salicylic compound for rheumatism, has given, on one or two occasions, unexpected symptoms of collapse. Trional and sulphonal continue to be reported occasionally as causes of severe prostration and serious anemia when their use has been continued for a considerable period without intermission. Some very interesting cases of poisoning from the use of excessive quantities (in each case a whole nut) of nutmeg are reported. The substance was employed in places so distant from each other as England and Australia for the purpose of producing abortion. Nutmeg is well known as a sedative, especially in Germany, and is often used as a mild hypnotic, being liberally dusted over night drinks for this purpose. There seems to be a widespread tradition as to its power as an abortifacient somewhat resembling that current in many parts of Europe with regard to the effect of phosphorus for the same purpose. The symptoms of nutmeg poisoning are those of a narcotic, though collapse, with muttering delirium, clammy extremities, almost imperceptible pulse and somewhat dilated pupils that react feebly to light are reported. The domestic use of nutmeg as an emmenagogue and as a hypnotic may occasionally, in susceptible persons, give some of these symptoms without more serious effects. Gangrene, especially of fingers and toes, continues to be reported as the result of applications of carbolic acid, notwithstanding the many warnings in this matter. Even such dilute solutions as 3 to 5 per cent. may produce gangrene if applied as a wet dressing. It is conceded now that this effect is due to a special susceptibility of the patient, rather than to the toxic effect of the drug. It has been noted that this susceptibility is occasionally a matter of heredity and that the physician about to employ carbolic acid in minor surgery can sometimes save himself from unexpected results by questioning the patient as to his heredity in the matter. Patients whose vasomotor apparatus is already in a disturbed condition, who have what is known as dermographia, or who suffer from Raynaud's disease, or Weir Mitchell's disease, even in mild form, must be guarded more carefully than others against the effects of carbolic acid applied locally. Progress in neurology in recent years shows that these affections are much commoner than used to be thought. It is said also that turpentine produces its undesirable dermatitic effects much more readily on patients who are suffering from one of these peripheral vasomotor disturbances that have just been mentioned.

It was thought for a time that lysol, the saponified product of coal tar with certain affinities to phenol, might prove a less dangerous substitute for carbolic acid. The poisoning cases reported, however, are more frequent than before. Complications from its local application are not common, but taken internally the drug can be quite as fatal as carbolic acid. Acetanilid has, of course, achieved a bad eminence in the matter of producing untoward effects. Its action in the headache powders so commonly used has brought it more and more to the notice of the physician of late years as a dangerous drug. A number of cases have been reported, however, in which its use locally as a dusting powder has been followed by rather serious symptoms. It usually produces its evil effects when used on abraded surfaces in children or the aged. When employed for the relief of the burning pain of so-called scalding in children it has several times produced affections resembling morbus cæruleus. Pyrogallol, when used locally in skin affections, still continues to be a reported source of toxic symptoms in susceptible individuals.

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[1] An Ephemeris of Materia Medica, Pharmacy, Therapeutics and Collateral Information, vol. vii, No. 1, E. R. Squibb & Sons, Brooklyn, 1903.

"SCIENCE, FALSELY SO-CALLED."

In these days of general information, when few subjects are too recondite to be of interest to the general public, it is only natural that popular magazines should take up striking discoveries and utilize them in a more or less sensational way. It is unfortunate, however, when such articles do not convey correct impressions or approximately correct impressions of facts. There is no limit to human belief, and a certain amount of appearance of scientific accuracy goes a long way in carrying on to acceptance grossly inaccurate statements. A correspondent in the *Popular Science Monthly*, a journal which popularizes science in a legitimate way, wrote to ask in regard to certain magazine articles by one Carl Snyder, as to whether they were reliable or not. These articles are of the class of which we speak, very attractively written, with vivid descriptions of alleged scientific truths. We say "alleged" because among a certain amount of facts there are so many inaccuracies that we can not call them scientific truths. This was the view of the editor of the *Popular Science Monthly*, whose answer to the query was in part as follows:

> Mr. Snyder appears not to have had a scientific training; his articles are sensational and inaccurate. This somewhat sweeping condemnation is easily justified. Let us consider the last article by Mr. Snyder that has come to our attention, "The Mechanism of the Brain," in *Harper's Monthly* for May. It is a potpourri of truth, half-truth and falsehood concerning chemistry, physics, anatomy, physiology and psychology. Thus we are told:
>
>> Or, supposing that this special colloid can not be fixed upon as the seat of the highest powers of man, they might be thrown upon that extraordinary and rather hypothetical ether, of which physicists talk so much and know so little.
>
> Within half a column Mr. Snyder passes easily from ether to electricity:
>
>> As there is no nerve action without the evident presence of electricity, it seems probable that nerve action, thought and consciousness, and what in our present ignorance we call electricity, are one and the same.
>
> Physicists may not know all that they would like to know about the ether and electricity, but they know enough not to write nonsense about them.

As an example of a misstatement of facts, the editor of the *Popular Science Monthly* refers to Mr. Snyder's statement as to the great weights of the brains of Byron and Turgenieff, which he gives as authoritatively verified. It can be definitely said that the weight of Byron's brain was unknown, and this is also true in the case of Turgenieff. With such apocryphal data interspersed in the article as alleged facts its value can be estimated. They vitiate the whole thing. Another queer statement quoted is that individuals may measure the size of their own brains and can find the directions how to do so in any good encyclopedia or by applying to the distinguished Professor Wilder of Cornell. In regard to this the editor remarks that, apart from such indications as are given by the size of the hat, the only feasible direction would be for the interested person to commit suicide and let Professor Wilder take the brain weight afterward. As a distinguished social diagnostician has remarked in one of his recent articles, one can not make estimates of capacity from any outside measurements.

While the above criticisms state very clearly some of the defects of the articles mentioned, we could add still others, such, for example, as Mr. Snyder's statement that the brain of the savage and idiot is rather smooth, while that of the highly-developed man or woman is grooved and folded in an extraordinary way. The average reader would certainly get the impression that only highly developed people have convolutions. One would infer that the author had either never seen the brain of an idiot or savage or else he is exceedingly careless in his statements on the subject. Another point for criticism is his allegation that there are only insensible gradations from the ape to the highest type of man. The fact is that there is a tremendous gap and the missing links, for they probably have existed, have not yet been found, and what have been reported as such are very inadequate to complete the chain. The field of scientific research is an indefinite one, and we have only touched on the borders of it here and there. There are ways of making the interested public aware of some of the advances that have been made without the exaggerated or incorrect statements that are so often indulged in. It would be better for popularizers to give out imaginary accounts embodying scientific facts after the fashion of Mr. Wells or more recently of Professor Newcomb than to lay down so-called truths which have so far no known basis. A little knowledge is a dangerous thing, especially if it is incorrect, and, furthermore, what we want in popularized sciences is less assumption and more logically demonstrated and established facts. The cultivation of a moderate amount of scientific skepticism would be an excellent thing for many readers of the statements of popular vulgarizers, for, with the public as with the individual, as was said by a philosopher, "It is better not to know so much than to know so many things that ain't so."

A PATRIOT PHYSICIAN OF THE REVOLUTION.

The *American Monthly Magazine*, the organ of a patriotic society, the Daughters of the American Revolution, in its April issue gives a complete account of Dr. Lyman Hall, one of the signers of the Declaration of Independence. The Journal has in the past noted the fact that nearly 9 per cent. of the members of the Continental Congress that settled the question of our independence were medical men of the day, but this does not yet seem to be generally known. Such a man as Rush was sufficiently prominent in medicine and in the early statesmanship of the country to be remembered in both, but Dr. Hall, like Drs. Thornton, Bartlett and Wolcott, is seldom mentioned in his medical professional relations and in connection with his part in establishing the liberties of this country.

The account given of Dr. Hall shows him to have been a very striking character in his way. A native of Connecticut and a graduate of Yale College, he commenced active life as a minister and had a pastoral charge for a short time. He, however, gave up the ministry and taught school, finally taking up the study of medicine. After his second marriage, in 1757, he removed to South Carolina and later to Georgia, where he became one of the most prominent practitioners of the colony. He was also one of the most strenuous advocates of the colonial cause against Great Britain and carried his own county when the rest of the province was non-committal or not active in the cause. In fact, it was probably largely due to his influence that later the colony of Georgia joined the federation and he was one of the delegates appointed to the Continental Congress, to which he had already been elected by his own district. He was three times elected to this body and obliged to abandon his large and lucrative practice and his property, which fell into the hands of the enemy, was confiscated or destroyed. In fact he was obliged to go back to the north on account of the occupancy of the territory by the British forces, but returned a little before the close of the war. He was appointed governor of the province. After his retirement from the executive chair he became one of the judges of the Supreme Court for the county, and shortly after died, on the ninth anniversary of the surrender of Cornwallis at Yorktown, in his sixty-seventh year.

While Dr. Hall never bore arms nor was connected with the army during the Revolution, as sometimes erroneously stated, his service to his country during those critical times places him high in the ranks of those who were the founders of the republic. He was preeminently a physician, though in his versatile career he followed all three of the learned professions. We are glad to notice this biography of one who, while prominent in other ways, worthily fulfilled the function of our honorable profession for the larger portion of his active life, and his memory should be kept green by his medical brethren for all time.

THE MISSOURI AND KANSAS FLOODS.

The floods now occurring in the great Missouri Valley, which are unprecedented for the region and probably as financially disastrous as the reports have stated, have an important sanitary bearing. While the immediate loss of life has probably been somewhat exaggerated, the ultimate effects may be much more serious than at present anticipated. Few people who have not seen the effects of a flood in a thickly populated section can conceive of the unsanitary conditions that are produced. Aside from the breaking up of homes and rendering them uninhabitable, the exposure and the mental effects on the victims, conditions are left that it will take considerable time to relieve, conditions that are seriously threatening the health and general welfare of the community. The choked-up sewers and the consequent impaired drainage after such a flood in any particular community, together with the amount of decomposing matter in every way out of place, require the close attention of the sanitary authorities and their most active efforts. Add to this the lessened resources of the community to meet the conditions and the problem is certainly a serious one. The derangement and destruction of the food supply of so large an area as thus involved is an important matter as regards its bearings on the health. We trust that the authorities, not only local but state, have a full appreciation of the demands that will be legitimately made on them in the immediate future and probably for some time thereafter. It will probably require a considerable period to bring back the flooded sections into their normal sanitary conditions.

THE CHRISTIAN HOSPITAL SWINDLE.

We publish elsewhere the report of the medicolegal committee of the Chicago (Cook County) Medical Society in regard to the so-called Christian Hospital of Chicago, mention of which was made in our editorial columns two weeks ago.[1] Our mail has been flooded daily with circulars of this institution from our readers, but we have avoided saying more than we did in our editorial above mentioned, for the reason that this investigation was going on. During the time of its existence we showed up the old St. Luke's Hospital at Niles, Mich., and it is unnecessary to more than refer to what we published in the past to corroborate the findings of the Chicago Medical Society's committee. This committee is to be congratulated on the result of its work so far, and while it is of special local interest, considering that local men are being used, it is also of interest to the whole profession. One of the most discouraging things in connection with this institution and its predecessors and like enterprises, is the fact that physicians can be so easily swindled. If this were not true, then such schemes would not be paying ones. It would be interesting at this time to know how many of those who bought the old St. Luke's diplomas have them still hanging in their offices. We believe that few of the readers of The Journal will be found among the list, and we sincerely hope none of them has been so foolish as to invest in this later scheme.

Medical News.

ARKANSAS.

New Graduates.—At the twenty-fourth annual commencement of the medical department of Arkansas University, Little Rock, a class of 12 had degrees conferred on them by Governor Jeff Davis. Hon. W. M. Kavanaugh delivered the address to the class.

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[1] See The Journal, May 23, p. 1443.

The New Arkansas Law.—The law regulating the practice of medicine and surgery became effective May 18, and in accord with its provisions the governor has appointed regular, homeopathic and osteopathic boards of examiners. Those from the regular school are as follows: Dr. Charles R. Shinault, Helena, first district; Dr. Oscar E. Jones, Newport, second district; Dr. George V. Poyner, Green Forest, third district; Dr. M. L. Norwood, Lockesburg, fourth district; Dr. Joseph P. Runyan, Little Rock, fifth district; Dr. William Crutcher, Pine Bluff, sixth district, and Dr. Adam Guthrie, Prescott, seventh district. At the first meeting of the board, May 25, Dr. Shinault was elected president, Dr. Runyan secretary, and Dr. Norwood, treasurer. The bond of the treasurer was fixed at $1,000.

CALIFORNIA.

Names Staff.—Dr. Frank K. Ainsworth, chief surgeon of the Southern Pacific Railway, has appointed Dr. Horace G. Cates assistant surgeon of the system, with headquarters at Los Angeles; Dr. George L. Hutchinson, assistant to Dr. Cates; Dr. Ernest A. Bryant, Los Angeles, local consulting surgeon, and Dr. Ernest M. Keys, local surgeon at Alameda.

More San Francisco Graduates.—Cooper Medical College on April 28, graduated a class of 45. Dr. David Starr Jordan, president of Stanford University, delivered the address.——The College of Physicians and Surgeons held its commencement exercises May 21. Dr. Winslow Anderson, dean, conferred degrees on a class of 28, and Prof. Robert E. O'Connell, delivered the address.

Committee to Investigate Tuberculosis.—At the last session of the Medical Society of the State of California, the following committee was appointed to investigate the prevalence of tuberculosis in the state, and to make such recommendations to the society at its next meeting as it may deem appropriate: Drs. F. M. Pottenger, Los Angeles, chairman; George L. Cole, Los Angeles; John C. King, Banning; George H. Evans, San Francisco, and Edward von Adelung, Oakland, secretary.

Personal.—Dr. David C. Barber has succeeded Orville R. Witherbee as superintendent of the Los Angeles County Hospital.——Drs. J. Hamilton Todd, Arthur L. Cunningham and Samuel H. Buteau, have been made members of the Oakland Board of Health.——Dr. Martin Regensburger, San Francisco, has been elected president, and Dr. Frank K. Ainsworth, San Francisco, has been appointed a member of the State Board of Health.——Dr. Frank H. Payne, Berkley, is critically ill with typhoid fever.——Dr. Edwin von Adelung, Oakland, has been reappointed health officer.——Colton's new board of health has elected the following officers: Dr. Joseph A. Champion, president, and Dr. F. H. Pritchard, secretary.——Dr. Samuel G. Huff, San Bernardino, county physician for five years, has resigned.

ILLINOIS.

Pana Board of Health Organized.—The board of health met May 20 and elected Dr. Roscoe C. Danford, president, and Dr. Frederick J. Eberspacher, secretary.

Change at Dunning.—Dr. John R. Neely, general superintendent of the Cook County Institutions, Dunning, has resigned on account of ill health and has been succeeded by Dr. Vaclav. H. Podstata, formerly assistant at the Illinois Eastern Hospital for the Insane, Kankakee.

Addition to County Hospital.—The hospital committee of the Cook County Board has decided to erect a special building for contagious diseases to accommodate 150 patients, and a building for the care of children, to accommodate 130. These buildings are estimated to cost $125,000.

Chicago.

Personal.—Dr. G. Morgan Clarke sailed for Germany, May 26.——Dr. G. Paull Marquis has been made assistant surgeon-general of the state, with the rank of lieutenant colonel, vice Dr. Charles Adams, *transferred at his own request to the First Infantry* as major and surgeon.——Dr. Charles Adams and wife have left for New York and sail for Liverpool June 10.

A Large Class Graduated.—On May 26, the largest class ever graduated from the medical department of the University of Illinois received diplomas from the president of the University, Dr. Andrew S. Draper, who also made the address to the class. Of the 230 graduates, 25 were women. At the annual banquet more than 600 alumni were present.

Faculty Changes.—Dr. Charles S. Bacon has been elected professor of obstetrics; Dr. Andrew McDermid, associate professor of obstetrics; Dr. Frank B. Earle has been transferred from the chair of obstetrics to that of pediatrics, which he shares with Dr. W. S. Christopher, and clinical pediatrics; Dr. Maximilian Kuznik has been made adjunct professor of anatomy, and Dr. D. Lee Shaw, professor of clinical anatomy in the medical department of the University of Illinois.

May Mortality.—The total deaths during May were 2,675; 47 more than the previous month and 546 more than for May, 1902. This is equivalent to an annual death rate of 16.69 per 1,000. Pneumonia caused 646 deaths, nearly twice the number of deaths during May, 1902, from this cause; consumption, 264; violence, 175; heart diseases, 193; nervous diseases, 151; nephritis, 147, and acute intestinal diseases, 113.

Smallpox in May.—During the month 45 cases of smallpox were discovered and removed to the isolation hospital. Of these 39 never had been vaccinated; 6 had old, imperfect marks, said to be from vaccination in childhood, and 15 were unvaccinated children under 6 years of age. There were 7 deaths, and 35 cases remain in the hospital, at the close of the month, as against 47 May 31, 1902, during which month there were 57 cases removed to the hospital.

MARYLAND.

Personal.—Dr. Christian R. Scheller, Hagerstown, has been reappointed health officer of Washington County.

Hospital Still Needs Funds.—Ten thousand dollars are still needed for the Cambridge United Charities Hospital, the cornerstone of which was laid May 26. Mr. John E. Hurst of Baltimore *has been its principal benefactor, giving $15,000.*

Baltimore.

Bonds All Sold.—All the new $75,000 5 per cent. bonds issued by the University of Maryland have been sold. A new pathologic building will be erected this summer.

The Week's Mortality.—The death-rate last week was only at the rate of 12.34 per 1,000 for whites, and 14.44 for both colors. Pneumonia deaths fell to 16, those from consumption to 25. One case of smallpox was reported.

Bahama Expedition Under Way.—The expedition for scientific survey of the Bahama Islands, under the auspices of the Geographical Society of Baltimore sailed June 1. Dr. Clement A. Penrose is vice-director and surgeon and chief of the medical staff, with J. A. E. Eyster, H. P. Cole, E. B. Beasley, and T. H. Coffin of Johns Hopkins Medical School as assistants.

Bequests.—The will of Miss Louisa Catherine Belt leaves $1,000 to Dr. William Travis Howard, "in grateful appreciation of his friendship," and $5,000 in reversionary bequest to the Hospital for the Relief of Crippled and Deformed Children to endow a bed in memory of her brother. The chief portion of the estate goes to her nephew, Dr. Henry Belt, New York.

Hospital Wins Suit.—The suit against the University Hospital for $30,000 damages for alleged breach of contract for treatment of a patient was decided in favor of the hospital authorities. The patient was scalded by a hot-water bag. Testimony showed that the regents of the university, against whom the suit had been brought, had nothing to do with the hospital, it being the property of the medical faculty.

Women Graduate.—The Woman's Medical College held its twenty-first annual commencement, May 30. Of the three candidates two received degrees. Dr. Eugene F. Cordell of the board of trustees conferred the degrees. The following were elected officers of the Alumni Association: President, Dr. Hattie Frist-Emmart; vice-president, Dr. Mary A. Waters; secretary Dr. Mary N. Browne, and treasurer, Dr. Jennie N. Browne.

Resignations Recalled.—At a meeting of the Medical and Chirurgical Faculty of Maryland, May 22, the resignations, from the State Medical Examining Board of the four members, Drs. J. McPherson Scott, W. W. Wiley, Franklin B. Smith, and E. McE. VanNess, were withdrawn. This was done in response to a resolution of the faculty expressing confidence in the board and *asking the withdrawal of the resignations.* Thus was tided over what seemed to be a crisis in the affairs of the board, and the Maryland profession is to be congratulated on retaining the services of these gentlemen.

Personal.—Dr. William Osler sailed for England, May 29, with his family. He will be gone until October 1.——Drs. James Bordley, Jr., Harry E. Peterman and C. E. Holly sailed for Europe May 30.——Dr. James Bordley, Jr., has resigned the chair of ophthalmology and otology in the Woman's Medical College.——Dr. Charles E. Simon has gone to Nova Scotia for the summer.——Dr. Alexander H. Saxton has been appointed medical examiner for the state of the Royal Arcanum, to succeed the late Dr. M. B. Billingslea.

Johns Hopkins Commencement.—The Johns Hopkins Medical School graduated 19 students, 6 of whom are women. Of these 19 are from the west, 11 from the north and east, 7 from the south, 8 from Baltimore, and 1 from Canada. Selden Irwin Ramforth of Cincinnati takes first honors The 13 hospital positions, awarded to the students standing highest, will be held by the following: Selden Irwin Ramforth, Frank Hosford Watson, Robert Talbott Miller, Jr, Charles Whittier Young, Clinton Ethelbert Brush, Jr, Victor Hugo Bissett, Arthur Douglass Hirschfelder, John Timothy Geraghty, Alexander Raymond Stevens, Lewis Clyde Bixler, Willis Bein Moulton, Catherine Hutchinson Travis, Henry D Long.

MASSACHUSETTS.

Munificent Gift to Stillman Infirmary.—In addition to his original gift of $150,000 James Stillman of New York has given $50,000 to be used in the erection of a ward for the treatment of Harvard students, all with contagious diseases, entirely apart from the main infirmary building.

Vital Statistics.—Boston's death rate for the week ended May 30 again showed a decrease, reaching 16 28 per 1,000 per annum Pneumonia as a cause of death dropped to 20. Twenty six children under 1 year died and 12 under 5 years. As this was the seventh week of continuous drought it indicates the comparative healthfulness of such periods in a modern, clean city. Of infectious diseases there were reported: diphtheria, 40 cases, with 6 deaths, scarlet fever, 40 cases, with 1 death, typhoid fever, 26 cases, with 3 deaths, measles, 37 cases, with 2 deaths, and tuberculosis, 21 cases, with 29 deaths

The Shattuck Lecture.—The Shattuck lecture before the Massachusetts Medical Society this year will be given by Dr Theobald Smith on "Malaria," on June 9 Besides the usual list of excellent papers to be presented before the sessions of the society on June 9 and 10, there will be, by vote of the councilors, a discussion of the subject of "Privileged Communications,' by Dr David W Cheever and by Walter Soren, Esq, and F J Stimson, Esq. It is hoped by many that this may be the beginning of a change in the laws of Massachusetts The annual discourse this year is by Dr. Herbert L Burrell, Boston.

MICHIGAN.

New Battle Creek Sanitarium Dedicated.—On May 31, in the presence of an audience of 20,000, the new sanitarium at Battle Creek was formally dedicated

Diplomas Awarded.—At the seventh annual commencement exercises of the Saginaw Valley Medical College, Saginaw, May 14, a class of 34 was graduated

The Most Dangerous Communicable Diseases.—Meningitis was reported present in Michigan during April, at 8 places, whooping cough at 54 places; diphtheria at 56 places, typhoid fever at 78 places; scarlet fever at 138 places, measles at 148 places, smallpox at 152 places, and consumption at 187 places Meningitis was reported present at 1 place more, whooping cough at 3 places more; diphtheria at 6 places less, typhoid fever at 16 places more, scarlet fever at 9 places less; measles at 28 places more, smallpox at 17 places less, and consumption at 2 places less in April than in the preceding month

Comparative Morbidity.—For the month of April, compared with the average for April in the 10 years, 1893 1902, smallpox, whooping cough, typhoid fever and diphtheria were more than usually prevalent, and consumption, intermittent fever, erysipelas, remittent fever and meningitis were less than usually prevalent The diseases which usually cause the most sickness in Michigan at this time of the year were slightly less prevalent than usual in the April just passed Possibly this lessened prevalence was due to the higher than average temperature, and the less than average amount of ozone present during the preceding month

April Mortality of Michigan.—The total number of deaths was 2,745, or a decrease of 289 from the preceding month The death rate was lower than for the preceding month, being 13 5 per 1,000 population The mortality was also less than for April, 1902 Important causes of death were as follows: tuberculosis, 227; typhoid fever, 37; diphtheria and croup, 41; scarlet fever, 16, measles, 22; whooping cough, 39, pneumonia, 309, diarrheal diseases, under 2 years, 36, influenza, 91, cancer, 123, accidents and violence, 136, and smallpox, 3. Comparing April with the preceding month there was a decrease in mortality from other forms of tuberculosis, typhoid fever, scarlet fever and measles, and a very marked decrease from pneumonia and influenza

NEW YORK.

Personal.—Dr. Harvey R Gaylord of the state cancer laboratory is convalescing from typhoid fever.——Dr. Earl P. Lothrop has returned from the south.

State Hospital Report.—The thirty second annual report of the Buffalo State Hospital for the year ended Sept 30, 1902, shows that the population of the hospital is: men, 1,059; women, 1,237 Of those discharged 87 were recovered, 70 improved, 148 unimproved, 150 died, and 19 inebriates. The percentage of recoveries to number of new admissions, 23 15: the percentage to average population, 1.79, and the percentage to number discharged, 18 35.

Fighting Mosquitoes on Long Island.—A new motive for the extermination of mosquitoes has come to light. The manager of William C Whitney's racing stable is undertaking a crusade against mosquitoes in that vicinity, because he declares "a thoroughbred horse is all nerves and a few mosquitoes can put it out of racing condition." He is endeavoring to secure the cooperation of state, city and borough authorities, pointing out that millions of people seek rest and recreation on Coney Island beach, while just back of this spot are extensive mosquito breeding marshes. It was insisted that mosquitoes did not breed on ground that was wholly covered once or twice a day, with sea water, but in brackish water and stagnant pools of so called fresh water.

New York City.

Uniforms for Hospital Employes.—Superintendent Mabon has ordered that all employes in Bellevue and the other city hospitals shall wear distinctive uniforms.

Explosion of a Physician's Automobile.—Dr. Silas C. Blaisdell, Brooklyn, had a narrow escape from injury. He had just alighted from his automobile at his door when the automobile exploded

Ambulance Surgeon Hurt.—Dr E P. Warren, an ambulance surgeon of Bellevue Hospital, was severely, though probably not dangerously, hurt, by an electric car colliding with the ambulance, and pinning the vehicle against a pillar of the elevated railroad The ambulance driver was less severely injured, but the horse was killed and the ambulance completely demolished.

Health Department Campaigns.—The health department has received an extra appropriation of $10,000 Part is to be used in the campaign against mosquitoes and malaria; part is to assist "the typhoid section" in inspecting the water reservoirs, testing clams and oysters, and inspecting milk supplies for possible typhoid infection, and part is to be used in securing the compilation of birth certificates in order to facilitate the work of looking after the milk supplied to young infants.

PENNSYLVANIA.

Philadelphia.

Additional Milk Inspectors Needed.—By request of Dr Martin, director of the department of health, the mayor will ask councils to provide four additional milk inspectors; this will double the present force

Bequests.—By the will of the late Dr. Spencer Morris, Morgantown, W. Va., a prize of $1,000 is provided annually for the student in the University of Pennsylvania who passes the best examination for the degree of M D. A bequest of $12,500 is also given to the Medico Chirurgical College.

In Memory of Dr. Morton.—Resolutions adopted by the board of managers of the Pennsylvania Hospital in memory of Dr Thomas G. Morton, recite that his connection with the hospital began as resident physician in 1857, and that he served as attending surgeon from 1864 until his death—thirty-nine years

Typhoid and Smallpox.—Typhoid fever has not abated, there being, for the week ended May 30, 264 new cases and 27 deaths, as compared with 262 new cases and 31 deaths the previous week Smallpox seems on the increase, there being for the same period 41 new cases and 7 deaths, as compared with 18 new cases and 4 deaths the previous week.

Jewish Hospital Association.—The thirty eighth annual meeting of the Jewish Hospital Association on May 31 marked the twenty fifth anniversary of the presidency of William B Hackenburg The growth of the institution has been notable, buildings recently added are a home for incurables, one for private patients, one for nurses and an operating building.

College of Physicians to Move.—The College of Physicians will move to a lot purchased for $80,000 at Chestnut and

Twenty-second streets. It is the purpose to push the construction of a handsome building on this new site. According to a census of the physicians of the city this site is geographically very near the medical center, and is sufficiently large (130x 180 feet) for a modern building adapted to the needs of this time-honored and great institution.

Jefferson Commencement.—At the seventy-eighth annual commencement of the Jefferson Medical College, held May 28, 166 received degrees. Prof. J. von Mikulicz-Radecki of Breslau was present, and had conferred on him the degree of doctor of laws, Dr. William W. Keen acting for the faculty and Hon. William Potter for the board of trustees, in bestowing the degree. Hampton L. Carson, attorney-general of Pennsylvania, delivered the annual address to the graduates.

GENERAL.

Studies Leper Immorality Problem.—The Hawaiian Board of Health asked its superintendent of the leper settlement to investigate the conditions of immorality condemned by the U. S. commissioners on their visit last fall. He recommends that divorces be secured for those in the settlement who have wives or husbands outside and that they be allowed to marry persons within the leper colony. A number would marry who are now prevented by marriage ties with those outside.

Home for Incurables Report.—In the four months ended Dec. 31, 1902, the Honolulu Home for Incurables at Kaimuki received 34 patients. These comprised Hawaiians, Europeans, Japanese, Chinese, South Sea Islanders, Porto Ricans and negroes, and the cost of their keep per day per patient was about $1.45. In the same period there were 6 deaths in the hospital, and the average number of patients for that time was 18. The home has an endowment fund of $65,000, and the running expenses for the time covered in the report amounted to $2,803.45.

CANADA.

Union at Trinity.—Convocation for the conferring of degrees in medicine was held at Trinity University, Toronto, May 28. Provost Macklem, vice-chancellor, who presided, stated that the union of Trinity Medical College and Trinity University was now complete.

Personal.—Dr. Mikulicz, the eminent German surgeon, was the guest, last week, of Dr. Francis J. Shepherd, Montreal, and during his stay in that city performed an operation for umbilical hernia at the General Hospital before a large number of Montreal physicians and the graduating class in medicine of McGill University.——Dr. Edmund G. Weir, late house surgeon of the Toronto General Hospital, has just been successful in passing the double qualification in London, England, of M.R.C.S. and L.R.C.P.——Dr. George A. Hetherington, superintendent of the New Brunswick Asylum for the Insane, has gone to Boston on two months' leave of absence suffering from nephritis. In his absence Dr. A. Emery will discharge the duties of superintendent, and in the event of Dr. Hetherington being incapacitated from resuming his duties, will likely be appointed his successor.

Ontario Board of Health Meets.—At the regular quarterly meeting in Toronto last week, the annual report of Dr. Bryce, the medical health officer, stated that the outbreak of smallpox in Galt, which originated in a case coming from Cleveland, had totaled 142 cases, with 11 deaths. For 21 years isolation and vaccination had been the chief weapons used in combating smallpox; and in view of the fact that there is now a bill before the Ontario legislature seeking to do away with compulsory vaccination. in Ontario, Dr. Bryce considered that the statistics of those years should receive wide circulation. From 1882 to 1900 there were 135 outbreaks, 1,085 cases and 170 deaths. In 1901 there were 199 outbreaks, 2,500 cases and 12 deaths. In 1902 there were 1,800 cases. No case had yet been heard of which was officially recognized as having been taken from Ontario into a neighboring state, all going to show the efficacy of vaccination. At a later session the board took up the subject of vaccination and the bill before the legislature seeking to abolish compulsory vaccination in the province. One member expressed his belief that not more than three members of the legislature would be found to support this bill. Dr. Bryce stated that during the four months of 1903 there had been 350 deaths from scarlet fever.

FOREIGN.

Plague in Chili is reported to have come in a cargo of rice from India; 8 cases and 5 deaths have occurred at Iquique.

The Mazatlan Plague.—One new case of plague appeared recently at Mazatlan, Mexico, which was brought from Siqueiros. Quarantine was established and the great alarm caused has been allayed by the vigorous measures adopted to prevent spread.

Amputation Without Consent.—A man sued the city of Dresden for damages because his leg had been amputated without his consent in the public hospital. He claimed $6000 or a yearly pension of $300; "pain money" $50, and "mutilation money" $1,200. The court awarded him $175 and no appeal was taken by either party.

The Miners' Disease.—The epidemic among the miners of Westphalia is so serious that some mines have had to be closed and the special commission appointed by the German government to investigate recommends severe measures to stamp the disease out. They think some years will be required. The identity of the disease is not decided; it is caused by a parasite.

Railroad Hygiene.—The administration of the railroads in Prussia has created the office of confidential physician to the service, with headquarters in Berlin. He will superintend the details of the application of the principles of hygiene to the cars, stations, homes of employes, etc., preparations for aid in case of accident, etc., and will make arrangements with sanatoria for reception of employes. His duties will also include the keeping of statistics in regard to diseases, accidents and deaths in the service.

Love Potions in the Twentieth Century.—A woman at Spandau, near Berlin, was sentenced to three months' imprisonment for selling a love potion to women anxious to retain the affections of their husbands. It was found to be a mixture of linseed oil, menthol and extract of cantharides. The accused appealed the case and summoned as witnesses the women who had been her customers. The latter unanimously testified that there had been no fraud, as the potion had accomplished its purpose. The accused was acquitted.

One Victory for the Physicians in the Contract Practice Troubles.—Our German exchanges announce that, thanks to the united stand of the profession and the aid afforded by the Leipsic Verband, the sick benefit society at Mühlhausen has been obliged to conform to the wishes of its medical officers and grant their demands for more suitable remuneration. After the resignation of the medical officers and the inability of the society to secure any new physicians to take their places, the complaints of the members were so urgent that the authorities were appealed to. The latter gave the society to a certain date to provide at least six medical attendants, and when this date had passed, proceeded to reappoint the physicians who had previously resigned, acceding to their demands.

Collective Blunder Inquiry.—The *Munich Med. Wochft.* states that the official organ of the German charlatans has organized a collective inquiry to collect information in regard to blunders and barbarity on the part of qualified physicians. It appeals to have all instances of the kind known to have occurred within the last two or three years communicated to it, the editor assuming all responsibility and guaranteeing the writers against all unpleasantness. The appeal announces that "not a small proportion but the majority of physicians commit blunders." The charlatans have also banded together and proclaim a "boycott" against five of the Berlin dailies which have not upheld them, the "boycott" to go into effect next October unless the papers change their tone in the meanwhile in this respect.

LONDON LETTER.

Mr. Hutchinson's Leprosy Investigation.

Before a crowded audience at the Polyclinic Mr. Jonathan Hutchinson reported the results of his recent tour in India. Lord George Hamilton, the Secretary of State for India, presided and stated that the Indian government took a very close and personal interest in the subject. He was very glad that leprosy had diminished in India. Twelve years ago a special commission was appointed to examine the questions of the causation and prevention of leprosy, but their report was not accepted as conclusive. Mr. Hutchinson said that he went to India with a perfectly open mind, but with a strong conviction that the fish theory was the only one to explain the prevalence and disappearance of leprosy. The special commission were on the whole unfavorable to that theory because there were a certain number of lepers in asylums who denied that they had ever eaten fish. During the last ten years there had been a decided advance in general opinion as to the causation of the disease. On all sides it was stated that *leprosy* disappeared before advancing civilization and improved hygiene, but it was hardly worthy of the science of the twentieth century to conceal its ignorance under such generalities. Leprosy had receded under many conditions of advancing civilization, but this was not invariably true, as, for instance in the West Indian Islands, Spain, Portugal and Cape Colony. That the disease had nothing to do with personal cleanliness, house accommodation, or an abundant supply of food was made clear by a thousand facts. The one factor was the use of badly-preserved fish, of which he exhibited dried specimens. Leprosy was scattered all over India, and there was no place to which the fish hypothesis could not be applied. Mr. Hutchinson repeated the arguments which have recently been given in THE JOURNAL. He advocated the abolition of the salt tax as an immense boon to the community and a means of prevention of leprosy by facilitating the proper curing of fish.

Insurance Against Appendicitis.

The popular dread of appendicitis, which has now become the best-known surgical disease to the public, has resulted in a novel form of insurance. An insurance company offers to issue policies at the rate of $1.25 per annum for every $500 and to issue policies up to $2,500. By the policy the owner is guaranteed all the medical, surgical and nursing expenses up to the amount insured by an attack of appendicitis. The company points out that this premium may be largely increased in the near future as the risk of such a policy can be only indefinitely estimated.

The "Hendon Disease."

In the town of Lincoln an outbreak has for a second time occurred, apparently similar to the scarlet fever outbreak which took place in Marylebone (a London borough) and is known as the "Hendon disease." That outbreak occurred in 1885 and was investigated by Mr Power and Prof. Klein, who concluded that several cows at a dairy at Hendon suffering from a peculiar vesicular eruption on the teats and on the body, but not noticeably ill, were the source of infection Since then several similar outbreaks have been reported and traced to the same cause. In the recent Lincoln outbreak the medical officer of health has traced all the cases to one dairy in the town. All the affected persons had partaken of milk from it and the cows were suffering from a vesicular eruption on the teats and other parts. The symptoms in man are as follows: On the first day sore throat, vomiting and sometimes diarrhea, followed in many cases by a scarlatiniform rash two days later, with desquamation about a week later Most of the patients fell ill on the same day, but none of the cases were serious and no deaths have been reported. Of 40 cases notified 14 occurred in one household. In the corresponding outbreak a year ago over 100 persons were affected That appears to have been a more severe one, for there were 4 deaths All the patients drank milk from one dairy In the Marylebone outbreak a streptococcus was obtained from the vesicles on the cows. It was cultivated, and in calves produced a disease in many ways analogous to scarlet fever in man, especially in renal affection.

Vital Statistics of London.

For the week ending May 16 there were 2,615 births and 1,278 deaths. The annual death rate per 1,000, which had been 16.8, 17.3 and 15.7 in the preceding three weeks, further fell last week to 14.4. There were as many as 59 deaths from violence, of which 12 were cases of suicide, and the remaining 47 were attributed to accident or negligence. Seven of these were due to vehicles in the street, 9 to drowning, one to an anesthetic and 7 (of infants) to suffocation in bed.

Correspondence.

The Christian Hospital Swindle.

CHICAGO, June 3, 1903.

To the Editor:—The Medicolegal Committee of the Chicago Medical Society wish to make the following statement to the profession of the United States:

On Sunday, May 17, Dr. J. B. Murphy brought the Christian Hospital of Chicago to our attention. Dr. Murphy had returned from Washington that morning. In his mail he had found a letter dated May 12, offering him the presidency of the Christian Hospital. This letter was written on a letter head bearing his name as president. In the same mail were a large number of letters from physicians of the far west and southwest, some of which were dated as early as the 12th, calling his attention to the hospital and enclosing various advertising items bearing his name as president. In the main the accompanying letters are very considerate in tone, occasionally one was abusive.

On Monday the committee consulted their attorney, Mr. A. E. Dacy, of Pam, Calhoun & Glennon. They then saw Mr. Deneen, States Attorney for Cook County, and Inspector Stuart of the postoffice department. Dr. Murphy was very anxious to ask for an injunction restraining the Christian Hospital from using his name. The authorities insisted that such a course would make it impossible for them to get information. Dr. Murphy consented to wait until our committee was ready. On yesterday, June 2, Inspector Ketcham had Drs. A. C. Probert and N. E. Wood, styling himself N. News Wood, arrested for improper use of the mail. To-day, June 3, Dr. Murphy has secured an injunction in the Superior Court of Cook County, prohibiting the use of his name by the Christian Hospital or by the officers thereof.

The history of St. Luke's Hospital, of Niles, Mich., is known to most readers of THE JOURNAL. That corporation was owned by Drs. Granville and Probert. The committee has in its possession proof that Probert has served a term in the Wisconsin penitentiary. Granville has indulged in various whimsicalities. The Chicago *Record Herald* for 1899 contains a telegram from New Carlisle, Ind., announcing his arrest for bigamy, specifying five wives. It will be remembered that they made unwarranted use of the name of Dr. N. Senn of this city. In their dental department they used the name of Dr. E. C. Kinsman of Cambridge, Mass. That this was without authority is shown by affidavits, copies of which are in our possession. In 1901 Michigan became uncomfortable for this institution, and this brings us to our present story. In 1893 the Secretary of State incorporated the "Chicago Store" for general merchandise purposes. In 1901 this charter was purchased by Drs. Wood and others and the name and purpose changed so as to allow of a hospital and dispensary. In 1903 the name was changed to "The Christian Hospital." It will be noticed that when St. Lukes faded in Michigan in 1901 this one appeared here.

The reading matter and the general business policy of the institutions are identical. Nearly every name found on the Christian Hospital staff was a member of the St. Luke's staff or has appeared in some connection with St. Lukes in the past. In this connection read articles in THE JOURNAL[1] and in the *Dental Digest* exposing St. Lukes. Even the most obtuse can see that the guiding spirit of the two institutions is the same.

The postal authorities have letters from at least six physicians stating that they purchased certificates by reason of Dr. Murphy's name. We ask every man who has purchased a certificate with this understanding to do his duty as a physician and as a citizen by writing Inspector Ketcham. We have not gotten hold of any certificate as yet. Will not those physicians who have certificates send them to the Medicolegal Committee of the Chicago Medical Society?

We wish to thank Dr. Murphy for his patience in spite of a good deal of misunderstanding and some abuse; to thank Mr. Deneen and Mr. Blair, of the State Attorney's office, and Inspector Ketcham as representing the postoffice authorities.

We will keep the profession posted as to later developments. In the meanwhile we must have their co-operation.

W. A. EVANS.
HAROLD N. MOYER.
C. S. BACON.

Priority in Enterorrhaphy Methods.

ST. LOUIS, June 1, 1903.

To the Editor:—In the May 30 issue of THE JOURNAL appears a most excellent article by Dr. O. Beverly Campbell, under the title "The Single Cuff Method of Circular Enterorraphy. A New Method." My object in writing is to call attention to the fact that the method is not new, although I consider just as much credit due Dr. Campbell for his extensive experiments and for his logical conclusions as though he had been the first to publish the method.

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[1] THE JOURNAL A. M. A., Sept 7, 1901, p. 648, and Nov. 16, 1901, p. 1329.

Die Beiträge zur klinischen Chirurgie, Bd. XIV (1895), 1-136, contains an article by R. von Frey, entitled "Ueber Technik der Darmnaht," in which he advances as original the operative procedure which Dr. Campbell has made the basis of such good work. Von Frey operated on ten dogs, of which number nine survived; while his microscopic specimens show the condition of the line of union at different periods up to two and one-half months. In a hasty survey of the literature on intestinal surgery I note that two textbook authors at least give von Frey credit for the method (both Frenchmen and very recent writers), though it would seem that his work has not become very generally known, so it is easy to see how Dr. Campbell could have overlooked it. The works to which I just referred are "La Suture Intestinale," par Terrier et Boudouin, and "Chirurgie de l' Intestin," par Jænnal, 2me edition.

As far as Dr. Campbell is concerned the method is original with him in a sense, since he evidently worked independently of any knowledge of von Frey's earlier experiments. Further, when Campbell's article reaches those who are familiar with von Frey's writings, they will be forced at least to admit that the American has done more than the German toward proving the truth of this surgical principle (as far as practice is concerned at least), since the latter worked on ten dogs alone, while the former performed 75 such experiments, to say nothing of two tests on the human subject. Willard Bartlett.

Marriages.

A. B. Howatt, M.D., to Miss Mabel Lewis, both of Chicago, May 21.

Anderson Mansfield Holmes, M.D., to Miss Azile Swann, both of Denver, April 25.

Allen Mason Thomas, M.D., to Mrs. Anna O'Neil Miner, both of New York City, June 2.

Thomas F. Spink, M.D., Washington, Ind., to Mrs. Juliet B. Brown, at Louisville, Ky., April 30.

Morton Raymond Gibbons, M.D., San Francisco, to Miss Mary Spayd Stubbs of Chicago, May 12.

Charles S. Valcour, M.D., Nashua, N. H., to Miss Florence G. Doherty of Manchester, N. H., May 23.

William King Campbell, M.D., Long Branch City, N. J., to Miss Lutie Hathaway of Long Branch, N. J., May 12.

Deaths.

Florence W. Hunt, M.D. Woman's Medical College, Chicago, 1884, whose death was noted in last week's issue, died May 27, after an abdominal section made at St. Mary's Hospital, Milwaukee. She was 45 years of age, was prominent in medical affairs for many years; was resident physician at the Cook County Insane Hospital during its stormiest days; was a member of the State Board of Health, and a member of the attending staff of St. Joseph's, and Cook County hospitals. Her illness was supposed to be appendicitis, but at the time of operation a more serious condition was disclosed. She was one of the founders and most active members of the Chicago Medical Women's Club.

George P. Cassidy, M.D. Miami Medical College, Cincinnati, 1885, died at his home in Shawneetown, Ill., May 15, from pneumonia, aged 43. He was one of the leading physicians of Shawneetown and Gallatin County. He founded the Gallatin County Medical Society, and also was a member of the Illinois State Medical Society and American Medical Association. He was a delegate to the state Medical Society, and had just returned from Chicago, where he had a chill and developed pneumonia, from which he died nine days later.

William C. Eichelberger, M.D. Rush Medical College, Chicago, 1870, a specialist on the eye and ear; a member of the American Medical Association, Vigo County (Ind.) Medical Society, of which he was once president, and the Wabash Æsculapian Society; who practiced for many years in Terre Haute, Ind., died at a sanitarium in Jackson, Tenn., after a long illness, May 18, aged 62. At a meeting of the Vigo County Medical Society, May 23, resolutions in honor of Dr. Eichelberger were adopted.

Thomas McCann, M.D. Bellevue Hospital Medical College, New York, 1886, surgeon of the Pennsylvania and Allegheny Valley railroads; surgeon to the West Pennsylvania Hospital, Pittsburg; consulting surgeon to St. Johns Hospital, Allegheny; professor of practical surgery, Western Pennsylvania Medical College; one of the most skilled surgeons of Western Pennsylvania, died at his home in East End, Pittsburg, May 9, from kidney disease, after an illness of two year's duration, aged 40.

Evan Hadley, M.D. Medical College of Indiana, Indianapolis, 1870, a member of the American Medical Association; for many years a member, and in 1888 president, of the Marion County Medical Society; for 30 years a physician of Indianapolis, died at his home in Mooresville, Ind., May 13, from organic heart disease, after a prolonged illness, aged 58. The Indianapolis Medical Society and the faculty of Dr. Hadley's alma mater adopted resolutions setting forth his excellences and deploring his loss.

Alice M. Potter, M.D. University of Buffalo, 1897, of Ithaca, N. Y., after heroic work and self-sacrifice in the recent typhoid fever epidemic, was attacked by the disease, with complications of appendicitis, endocarditis and pericarditis. Despite operation for appendicitis, she died at her home in Ithaca, May 2, aged 33. The physicians of the city, at a special meeting held May 2, adopted resolutions setting forth their appreciation of Dr. Potter's services and their loss by her death.

Edward Charles Wendt, M.D. University of Strassbourg, 1877; College of Physicians and Surgeons, New York, 1880; a member of the editorial staff of the *Medical Record* for several years, and an authority on sanitation and public health, committed suicide while temporarily insane from illness, by shooting himself, May 25, aged 45. He was residing in Paris at the time, and had been making exhaustive studies of the methods of sanitation in Europe.

George Pierce Andrews, M.D. College of Physicians and Surgeons, New York, 1862, one of the founders of Detroit Medical College, the Detroit Academy of Medicine and the Michigan State Medical Society, and until 1881 professor of theory and practice of medicine in the Detroit Medical College, died May 9 at his home in Honolulu, H. I., where he had lived for 13 years, after an illness of four days, aged 65.

Octavius A. White, M.D. Medical College of the State of South Carolina, Charleston, 1848, famous during the Civil War as a yellow fever expert, for many years a resident of New York City; a member of the New York Academy of Medicine, died at his home in New York from Bright's disease, May 25, after an illness of several weeks, aged 77.

James Clark Channell, M.D. University of Pennsylvania, Philadelphia, 1871, a member of the American Medical Association; a veteran of the Civil War; a member of the York County (Pa.) Medical Society, died at his home in Wrightsville, May 19, from pneumonia, after an illness of one week, aged 59.

John Perrier, M.D. McGill University, Montreal, 1868, professor of theory and practice of medicine, Cleveland College of Physicians and Surgeons, died from typhoid fever May 10, at his home in Cleveland, after an illness of four months, aged 60. He was a member of the American Medical Association.

Rufus Osgood Mason, M.D. College of Physicians and Surgeons, New York City, 1859, acting assistant surgeon in the Navy throughout the Civil War; a member of the New York Academy of Medicine and the Society for Psychological Research, died at his home in New York City, May 11, aged 72.

Dallas Bernhardt, M.D. College of Physicians and Surgeons, Baltimore, 1885, a member of the Huntingdon County (Pa.) Medical Society, died at his home in Three Springs, March 30, aged 46. The society, at its meeting May 14, adopted memorial resolutions regarding Dr. Bernhardt's death.

Wilson Cornelius Marden, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1896, of Pittsfield, Me., died at Mercy Hospital, Prescott, Ariz., from pulmonary tuberculosis, May 1, after an illness of four months, aged 36. He was a member of the American Medical Association.

Clinton Henry Lubbock, M.D. University of the State of Missouri, Columbia, 1880, died at his home in Alameda, Cal., from paresis, after an illness of several months, May 20, aged 42.

He served four years as member and one term as president of the local board of health.

Charles William Doyle, M.D. University of Aberdeen, Scotland, 1875, prominent alike as a citizen, physician and writer, author of "The Taming of the Jungle," died suddenly from apoplexy, at his home in Santa Cruz, Cal., May 1, aged 53.

James Melvin Sims, M.D. Marion-Sims Medical College, St. Louis, 1899, formerly of Galena, Mo., a member of the American Medical Association, died at his home in Marion, Ill., May 16, from tuberculosis, after a long illness, aged 33.

Samuel G. Dearborn, M.D: Dartmouth Medical College, Hanover, N. H., 1850, a surgeon in the Civil War, and some-time member of the New Hampshire legislature, died suddenly at his home in Nashua, May 8, aged 76.

Frank Daniel, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1902, died at his home in Moultrie, Ga., May 6, from injuries received in a collision between a motor car and a logging train, a few hours before.

Stuart Bates, M.D. Toronto (Ont.) University Medical Faculty, 1888, a member of the American Medical Association, died at his home in Virginia, Minn., May 6, from accidental poisoning by laudanum, aged 38.

Thomas Carroll Rich., M.D. Maryland University School of Medicine, Baltimore, 1869, died at Williamsport, Pa., aged 59. He was a member of the state medical society and of the American Medical Association.

Alfred Hasbrouck, M.D. College of Physicians and Surgeons, New York, 1848, for more than half a century a practitioner of Poughkeepsie, N. Y., died at his home in that city, May 9, after a short illness, aged 82.

Louis Knorr, M.D. Oglethorpe Medical College, Savannah, Ga., 1860, formerly professor of chemistry in Savannah Medical College, died suddenly, May 12, at his home in Savannah, from apoplexy, aged 78.

John W. Kirkpatrick, M.D. Rush Medical College, Chicago, 1888, president of the Eastern Iowa Medical Society, died suddenly in his office at Wyoming, Iowa, May 13, from heart disease, aged 40.

Harris Lee Paige, M.D. Jefferson Medical College, Philadelphia, 1896, formerly of New Britain, Conn., was found dead in his office in Dover, Del., April 30. His death was due to apoplexy.

Andrew Jay, M.D. Medical College of Alabama, Mobile, 1872, member of the legislature from Conecuh County, Ala., died suddenly from heart disease at his home in Evergreen, May 8, aged 52.

Hans J. Englund, M.D. Bennett Medical College, Chicago, 1888; Rush Medical College, 1895, died May 5, from pneumonia, after an illness of eight days, at his home in Cambridge, Minn., aged 46.

Joshua Chitwood, M.D. Miami Medical College, Cincinnati, 1858, a surgeon during the Civil War, died May 13, at his home in Connersville, Ind., from Bright's disease, after a long illness, aged 65.

Samuel Bridgland, M.D. Queen's University, Kingston, Ont., 1870, of Bracebridge, Ont., a member of the Ontario legislature, died, May 6, from Bright's disease, after a long illness, aged 56.

Warner F. H. O'Keefe, M.D. New York Homeopathic Medical College and Hospital, 1875, died, May 20, from Bright's disease, after an illness of two years, at his home in Pittsburg, Pa.

Howard Vance, M.D. Kentucky School of Medicine, Louisville, 1884, formerly of Ava and Le Roy, N. Y., died in Yonkers, N. Y., April 30, after an illness of four months, aged 40.

Stephen E. Rice, M.D. University of Pennsylvania, Philadelphia, 1893, died at his home in Memphis, May 6, from the effects of a self-inflicted gunshot wound of the head.

Ephraim L. Acker, M.D. University of Pennsylvania, Philadelphia, 1852, member of congress in 1870, died at his home in Allentown, Pa., May 12, after a long illness, aged 76.

Charles C. Sparklin, M.D. Rush Medical College, Chicago, 1861, died suddenly from heart disease at Goshen, Ind., where he had practiced for more than 40 years, May 5, aged 62.

Hiram J. Hartley, M.D., one of the oldest practitioners of Vigo County, Ind., died at his home near Spring Hill, May 1, from cancer, after a protracted illness, aged 79.

John Reid, M.D., 1877, health officer of Chicago after the great fire of 1871, died in London, England, May 14, from acute bronchitis, after a short illness, aged 80.

Walter Byron Sherman, M.D. Cleveland Medical College, 1870, died at his home in Eagle Cliff, Cuyahoga County, Ohio, May 19, aged 72.

Abram M. McAlpine, M.D. Columbus Medical College, 1877, of Peoria, was found dead from chronic alcoholism, April 27, aged 45.

John H. Shelton, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1882, died at his home in Tower Hill, May 13, aged 68.

George C. Synon, M.D. Rush Medical College, Chicago, 1880, died at his home in Chicago, May 21, from paralysis, aged 45.

Oliver C. Evans, M.D. Pulte Medical College, Cincinnati, 1878, died at his home in Joplin, Mo., May 5, aged 58.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

ELIGIBILTY FOR MEMBERSHIP.

WHITE CASTLE, LA., May 29, 1903.

To the Editor:—Please answer the following question through THE JOURNAL: Is a homeopathic graduate, who claims he does not practice "sectarian medicine," and who is a "legally qualified and registered physician" eligible for membership in the county society, state association and American Medical Association?

WHYTE GLENDOWER OWEN.

ANS.—Each affiliated state society regulates membership in its own territory.

Medical Organization.

Reorganization Work in Arkansas.

The Arkansas State Medical Association met at Jonesboro, April 30 and May 1 and 2. The new order of things was in evidence on every hand. The actual membership had increased during the year from 190 to 697, and the increase in enthusiasm and zeal was even greater. This spirit was especially manifest in the officers and council, made up in the main from the younger members.

The program was an excellent and extensive one, and there was ample time for a full and free discussion of every paper, as the house of delegates relieved the scientific body of the consideration of all business and ethical matters. As the house of delegates was a comparatively small body, containing only about fifty members, business affairs received prompt and satisfactory attention. It was especially pleasing to find how easy it was to arrange the work of the house of delegates so as to permit the delegates to attend and take part in most of the scientific work of the general meetings.

Added interest was given to this session by the fact that an effective medical examining law had been passed by the general assembly that had just adjourned, and it was the duty of this first house of delegates to nominate members from which the governor would select the first Arkansas State Medical Examining Board. A law was also secured during the year, abolishing the system of "drumming" for practice at Hot Springs, and imposing heavy penalties on such solicitors, and all who employ them. This practice had grown to such proportions in recent years as to be a standing reproach to the profession. To the unity growing out of new methods of organization was given the credit for the enactment of all of this legislation, and it gave members some idea of what it would be possible for the profession to accomplish, when the organization was as complete as it could be made.

The council had proven so efficient that little change was made in its personnel for the coming year. It met and organized before the final adjournment of the session, the following being a list of its officers and members: E. T. Dibrell, Little Rock, chairman; Montague Fink, Helena, secretary; G. A. Warren, Imboden; M. M. Inman, Quitman; Vernon McCammon, Arkansas City; Morgan Smith, El Dorado; J. S. Coon, Nashville; C. T. Drennen, Hot Springs; J. B. Bolton, Eureka Springs, and H. D. Woods, Fayettesville.

The officers elect of the association are: President, Leonidas Kirby, Harrison; vice-presidents, J. L. Burns, Jonesboro; J. C. Cleveland, Bald Knob; J. C. Wallis, Arkadelphia; Secretary, J. P. Runyan, Little Rock; treasurer, R. C. Thompson, Pine Bluff.

Societies.

COMING MEETINGS.

Medical Society of Delaware, Dover, June 9.
Massachusetts Medical Society, Boston, June 9-10.
Michigan State Medical Society, Detroit, June 11-12.
Minnesota State Medical Society, St. Paul, June 17.
Medical Association of Montana, Helena, June 17-18.
Medical Society of New Jersey, Asbury Park, June 23-25.

Smith County (Texas) Medical Society.—At the meeting in Tyler, May 12, the following officers were elected: Dr. William S. Lacey, Troupe, president; Dr. Charles A. Smith, Tyler, vice-president, and Dr. Albert Woldert, Tyler, secretary and treasurer (re-elected).

Arundel Medical Society.—At the annual meeting in Annapolis the following officers were elected: President, Dr. H. Baldwin Gantt, Waterbury; recording secretary: Dr. B. R. Davidson, Davidsonville; corresponding secretary, Dr. Charles B. Henkel, Annapolis, and Treasurer, Dr. Frank H. Thompson, Annapolis.

Gallia County (Ohio) Medical Society.—At the May meeting the following officers were elected: President, Dr. Theodore L. Chadbourne; vice-president, Dr. Ella G. Lupton; secretary, Dr. Harry S. Allen; treasurer, Dr. S. W. Williams, and censors, Drs. Charles G. Parker, James T. Hanson, and John B. Alcorn, all of Gallipolis.

Jefferson Medical College Alumni Association.—At the annual banquet, held May 27, Dr. Thomas D. Davis of Pittsburg, esident, acted as toastmaster. Charles Emory Smith, Daniel ugh, Dr. James C. Wilson, and Dr. S. Weir Mitchell reponded to toasts. The following officers were elected for the ensuing year: President, Dr. W. Joseph Hearn, Philadelphia; a vice-president from each of the states, and one representing the Philippines; corresponding secretary, Dr. Charles S. Barnes, Philadelphia; recording secretary, Dr. Frank C. Hammond, Philadelphia; treasurer, Dr. William M. Sweet, Philadelphia, and chairman of executive committee, Dr. James T. Rugh, Philadelphia.

Chickasaw (I. T.) Medical Association.—The seventh semi-annual meeting was held in Tishomingo I. T., May 13, the president, Dr. James W. Gilbert, Roff, in the chair. The association was reorganized under the new constitution and by-laws as recommended by the American Medical Association. The following officers were elected for the ensuing year: Dr. Herbert P. Wilson, Wynnewood, president; Dr. John D. Batson, Marietta, first vice-president; Dr. F. P. Bates, Durwood, second vice-president, and Dr. J. W. Shelton, Wynnewood, secretary and treasurer. Dr. James W. Gilbert, Roff, was elected delegate to the Indian Territory Medical Association, which met at South McAlester, June 2 and 3. The eighth semi-annual meeting will be held in Ada, I. T., in November.

New York State Medical Association—First District Branch.—The nineteenth annual meeting was held, May 26, at Watertown. There were about sixty physicians present, among whom were the following: B. C. Cheeseman, Andrew J. Dick, Charles C. Kimball, J. O. Stranahan, J. N. Bassett, Edgar H. Douglas, Parker Syms, president of the Fifth District Branch of the New York State Medical Association; Dr. Frederick Holme Wiggin, president of the state association, and others. Hon. James F. Pappa, mayor of the town of Watertown, gave an address of welcome. A good program of scientific papers was carried out. Eleven new members were elected, and the following officers for the ensuing year: President, J. Orley Stranahan, Rome; vice-president, Dr. John N. Bassett, Canton, and secretary and treasurer, Dr. Edgar H. Douglas, Little Falls.

University of Maryland School of Medicine Alumni Association.—At the annual meeting and banquet, May 18, the following officers were elected: President, Dr. Henry D. Fry, Washington, D. C.; vice-presidents, Drs. George E. H. Harmon, U. S. Navy; George R. Graham and Jonah E. Gichner, Baltimore; recording secretary, Dr. Charles E. Sadtler, Baltimore; corresponding secretary, Dr. J. Fussell Martenet, Baltimore; treasurer, Dr. G. Lane Taneyhill, Baltimore, and executive committee: Drs. John I. Pennington, W. F. Skillman, J. M. Hundley, W. E. Wiegand and H. H. Biedler. The following committee to make arrangements for the centennial celebration to take place in 1907, was appointed: Drs. G. Lane Taneyhill, Eugene F. Cordell, J. Fussell Martenet, B. Merrill Hopkinson, Wilmer Brinton, John T. King, C. E. Sadtler, James H. Jarrett, John I. Pennington, Wilbur F. Skillman. The banquet hall was decorated with the university colors, and president John T. King acted as toastmaster. Toasts were responded to by Drs. George H. Hocking, John I. Pennington, J. Holmes Smith, Hon. John P. Poe, of the School of Law, C. J. Grieves, D.D.S. of the Faculty of Dentistry, and Mr. A. L. Wilkinson, president of the graduating class. There were 141 subscribers to the banquet.

AMERICAN SURGICAL ASSOCIATION.

Annual Session, held in Washington, D. C., May 12 to 14, 1903.

The President, Dr. Maurice H. Richardson, Boston, in the Chair.

President's Address.

Dr. Maurice H. Richardson, Boston, in his presidential address, spoke of the great opportunities exploratory operation offered for the study of internal diseases, especially in their earliest stages, in many instances being the only method which afforded an opportunity for exact observation. He said: "The surgeon, then, in his opportunities for observation and study, has contributed vastly to our knowledge of internal disease, especially in its early stages. His explorations demonstrate truth and control opinions; they perfect observations, and, in showing the value of deductions, teach their weight; they prove the interdependence of symptoms on lesions, and of lesions on symptoms; they demonstrate the fallacy of some inferences and the truth of others. Accumulated experience will show these things so clearly that in time the diagnosis of the clinician will approach the accuracy of scientific demonstration. In therapeutics surgery has shown what surgery can do and what it can not do, as well as what medicine can and can not do. Surgery will show still more clearly its own limitations, as well as the limitations of clinical medicine. Working together it seems not impossible that in the near future there will be no borderland between them. It will then have been demonstrated that internal diseases, even some of those now regarded as hopeless, will, by surgical or by medical therapeutics, or by both, be delegated to that class of brilliant achievement to which now belong appendicitis, gallstones, and internal hemorrhage."

Papers on Toilet of the Peritoneum.

Dr. George R. Fowler, Brooklyn, read a paper entitled "The Toilet of the Peritoneum in Appendicitis," in which he laid especial stress on the importance of avoiding infecting any areas that were not infected. When drainage is instituted, it should be by glass or smooth rubber tubes.

IN STOMACH SURGERY.

Dr. Albert Vander Veer, Albany, read a paper entitled "Operations on the Stomach, with Special Reference to the Toilet of the Peritoneum." The author felt that much of the success in the treatment of this line of cases was due to the care exercised in the toilet of the peritoneum. The abdominal contents should be handled as little as possible; traumatism should be avoided, as should also soiling the peritoneum by secretions from the mucous surfaces, which are fertile sources of infection. The importance of drainage was emphasized especially in operation on the region of the posterior wall of the stomach.

IN TUBERCULAR PERITONITIS.

Dr. A. J. Ochsner, Chicago, read a paper entitled "Toilet of the Peritoneum in Tubercular Peritonitis," in which he gave a careful résumé of the literature on the subject and his personal experience, and recommended early operation if the case was seen while the infection was still within a confined area, but if the diagnosis had not been made until late, and the patient was very weak and the infection general, he felt it was better to wait a few days until the condition becomes a little more favorable for operation.

IN PHLEBITIS.

DR. ARPAD J. GERSTER, New York, read a paper entitled "Septic Phlebitis of the Roots of the Portal Vein and Pylephlebitis, Together with Some Remarks on the So-called Peritoneal Sepsis," in which he went fully into the literature on the subject and reported four cases, giving the important diagnostic and prognostic points, and stating that while he believed the prognosis was very bad, it was not invariably hopeless, but that early diagnosis and prompt operation are the only safeguards.

DRS. R. H. HARTE, Philadelphia, and S. H. WEEKS, Portland, Me., also read papers on the toilet of the Peritoneum.

AFTER GUNSHOT WOUNDS.

DR. GEORGE TULLY VAUGHAN, Washington, *D. C.*, read a paper entitled "Toilet of the Peritoneum in Gun-shot Wounds of the Stomach and Intestines," in which he emphasized the necessity for drainage and thorough cleansing of the abdominal contents in all cases.

IN DIFFUSE PERITONITIS.

DR. JOSEPH BLAKE, New York, read a paper entitled "The Treatment *of* the *Peritoneum* in Spreading and Diffuse Peritonitis," in which he divided the purulent forms of peritonitis into three classes: 1. Cases in which there is a localized collection of pus with limiting adhesions: 2. Cases with spreading peritonitis, in which there is no limitation of the process by adhesions or gravitation, but in which the limits are ascertainable. 3. Cases of general peritonitis, in which no parts of the peritoneum, possibly excepting the lesser sac, can be demonstrated as free from the invasion. The treatment which has given the best results in his experience is as follows: 1. Early operation. 2. Lavage of the peritoneum with large quantities of saline solution. 3. Closing of the peritoneal cavity without drainage, unless the latter is absolutely indicated by the presence of non-absorbable amounts of necrotic material. Appended to the paper was the report of a large number of cases.

DISCUSSION.

DR. JOHN C. MUNRO, Boston, discussed Dr. Gerster's paper, and said he considered the chill a very important symptom, although a very irregular one. In his opinion the sensorium is not clouded, the appetite is ravenous, although there may be tremendous emaciation, and in many cases jaundice is present. He believes that if cases could be gotten early enough they could often be satisfactorily treated. The subphrenic abscesses are more apt to be secondary, following liver abscesses, although they may come from retroperitoneal lymphangitis.

Operations for Trigeminal Neuralgia.

DR. ROBERT ABBE, New York, read a paper on a simplified and improved operation for trigeminal neuralgia, by intracranial neurectomy, with *interposition of rubber tissue, and without* resection of the gasserian ganglion. After having operated for many years *by the usual intracranial method, with one* death from shock, he had adopted a modified method in eight cases *during the past seven years, which he regarded as a* distinct improvement. Satisfied from study of the nerves removed *extensively* anterior to the base of the skull, that the disease is, in almost all cases, an inflammation of the nerves *affected in the bony channels* adjacent to the antrum and teeth, he regards the temporary cure by nerve resection within the skull as proving that ganglion resection is uncalled for. The recurrence being unquestionably due to reunion, he prevents that by interposing a small piece of sterile rubber tissue between the ganglion and the outlets of the second and third branches, which are all he ever resects. This method has, in eight cases, given the same excellent results as in ganglion resection.

Experiments on rubber tissue showed that it always remains sterile and is never changed in texture. Therefore it remains as a permanent barrier to reunion. The complete operation consists in: Ligation of the external carotid in the neck; a straight incision from just behind the middle of the zygomatic arch; upward and slightly forward in the temporal fossa; splitting the temporal muscle and scraping it widely from the bone; enlarging to one and a half inches a small trephine opening, and lifting the brain and dura mater from the middle fossa; exposing and resecting a half inch of the second and third branches in front of the gasserian ganglion; spreading a rubber tissue strip an inch and a half long over the openings and pressing it down on the bone till all bleeding stops; letting the ganglion settle down *on* the tissue and closing the wound.

DISCUSSION.

DR. GEORGE R. FOWLER, Brooklyn, commented on the uncertainty of the author's method, reporting a case in which it worked very well, and another one where it did not work at all, although he was able to explain the cause of the failure in the latter case. He did not think one could depend entirely on *the ligature of the* external carotid as a means of preliminary hemostasis.

DR. GEORGE E. *BREWER*, New York, mentioned a case in which he had employed the methods with satisfactory results. His experience in ligature of the external carotid has been that the hemorrhage is venous, and hard to control, seeming to come in most cases from a tributary of the cavernous sinus.

DR. ABBE claimed to have satisfied himself that the disease was in the nerve and not in the ganglion. He referred to the existence of spots of inflammation along the nerve sheath, which he thought were probably the original sites of the neuralgia, from which the disease worked its way back to the ganglion, if not into it.

Ulcer of the Bladder.

DR. GEORGE E. ARMSTRONG, Montreal, Canada, read a paper entitled "Single Ulcer of the Urinary Bladder, Non-tuberculous and Non-Malignant, with Report of Cases," in which he reported the case of a man 21 years of age, without venereal *history and of temperate habits, in whom the attack came on* suddenly without known cause, accompanied by the following symptoms: 1. *Pain at the end of the penis about the corona* and on the dorsum, just before micturition and generally so severe as to necessitate the administration of morphia. 2. Frequent micturition, and 3, loss of expulsive power. The patient died eight months after the onset, operation having been performed in the meantime, and the autopsy showed acute miliary tuberculosis of both lungs, the left adrenal, spleen, left ureter, kidneys and bladder. The second case occurred in a boy 12 years of age and was cured by injections of silver nitrate. He went fully into the literature on the subject and stated that he believed the three chief causes of single ulcer of the bladder to be *infection*, thrombosis and syphilis. The chief symptoms are pain, frequency of micturition and *presence of small quantities of blood in the urine.* The prognosis is good, if recognized early, and he believed *operation gave as good chances of relief as for ulcer in the* stomach.

DISCUSSION.

DR. WILLIAM L. ESTES, Bethlehem, Pa., added another case to those reported in the paper. The case was one of a man fifty years old, who was operated on with the idea that he had septic peritonitis, but his condition was found to be due to an ulcer of the bladder resembling very closely an ulcer of the stomach. The patient made a good recovery.

DR. H. R. WHARTON, Philadelphia, narrated a case of *enchondroma* of the spinal column, which developed a year after a strain while lifting. The tumor was excised and *the patient* recovered.

(To be continued.)

AMERICAN GYNECOLOGICAL SOCIETY.

Twenty-eighth Annual Meeting, held in Washington, D. C., May 12 to 14, 1903.

The President, Dr. Joseph E. Janvrin, in the Chair.

(Continued from page 1531.)

Repetition of Cesarean Section on the Same Patient.

DR. CHARLES M. GREEN, Boston, after a brief summary of the experience of the Boston Lying-In Hospital with repeated cesarean sections, raised the question whether it is justifiable in performing cesarean section for either an absolute or an

The Differential Diagnosis.

Dr. George E. Brewer, New York, claimed that much of the information obtained in reference to this disease has been due to the conditions found at the time of operation. He divided the subject into (1) calculus disease, (2) inflammatory disease, and (3) new growths, and called especial attention to the pain in impacted gallstone. The presence of the gall bladder near the median line, as well as its congenital absence, was referred to, and the cause of the pain in gall-bladder disease was believed to be due to inflammatory conditions, although it may be due to pressure and spasm. The most characteristic symptom of cholelithiasis was considered to be the pain, while the most conspicuous symptoms of stone in the common duct were mentioned as jaundice, pain and fever. In the author's opinion, inflammation of the gall bladder is present in most cases coming under the surgeon's hands, but a tumor of the gall bladder was rarely found. The three chief symptoms of obstruction were given as (1) pain, (2) tumor and (3) jaundice, and the fact that gallstones are rarely found in young persons, say under 20, was alluded to.

The Etiology and Pathology of Gallstone.

Dr. C. A. Herter, New York, considered the chief constituents of gallstones to be cholesterin and bilirubin. He showed a table giving the results in the formation of cholesterin after injections into the gall bladder. After mentioning that cholesterin is increased in pneumonia, he stated that the quantity of this substance in the blood was very little in relation to the quantity in the bile. As to bacteria in gallstones, reference was made to the work of Welch, who found the *Streptococcus pyogenes*, or the colon bacillus, while a bacterial nidus was found in one-half of the stones. In reference to the artificial production of stone the principal obstacle to its accomplishment was believed to be the flow of bile. Inflammation of the gall bladder superinduced by ascites and unaccompanied by any infection, is not itself sufficient to give rise to a very marked increase in the percentage of cholesterin in the bile. The author stated that gallstones may be produced experimentally by the introduction of bacteria, although he felt there was considerable evidence that we are going a little too far in assuming that all cases of gallstone are due to bacteria and nothing else.

Stomach Complications.

Prof. C. A. Ewald, Berlin, read a paper on "The Diseases of the Gall Bladder and Bile Ducts, with Especial Reference to Diseases of the Stomach and Intestines," in which he stated that gallstones arise from a catarrhal condition of the mucosa, often occurring in members of the same family, showing a predisposition. He raised a question as to gallstones causing pain, stating that the colic may be due to contractions or inflammations, with or without stone. He looked on the pain as being a very variable factor, and as sometimes originating from the transverse colon. The importance of chemical and microscopic examinations of the gastric contents was spoken of, and the statement made that hyperchlorhydria was frequently present and disappeared with the attack. He stated that gall-bladder colic was variable, irregular and frequently occurred at night, and called attention to the similarity between gastric crises and gallstone colic. The importance of differentiation between gall-bladder colic and acute pancreatic disease was briefly alluded to, and it was claimed that a tumor of the gall bladder was more frequently absent than present. The stones may perforate into the colon, and the contents of the intestines may be vomited, while infection of the bile passages from carcinoma occurs fairly frequently. The author believes that 95 per cent. of all cases of carcinoma are complicated with cholelithiasis. He made the statement that carcinoma is more frequent in women than in men, the percentage being about four to one, and called attention to the fact that it was unknown why stone should sometimes cause ulceration and at other times carcinoma. In his opinion carcinoma of the biliary passages is less frequent in women than in men, and expressed himself as being in favor of medical treatment in gall-bladder cases being employed first. He advised the ordinary known remedies during an attack of acute inflammation, but where they were unusually severe he recommended prompt operation, as well as in recurrent attack. The possible fatal result of a parenchymatous hemorrhage was alluded to, and also the unfortunate results which sometimes follow operation.

A Study of 534 Operations on the Gall Bladder and Bile Ducts.

Dr. William J. Mayo, Rochester, Minn., commenced his paper with the statement that in Nature's defense against infection within the abdominal cavity there are three weak situations, the fallopian tube, the appendix and the gall bladder, of which the first to gain an accepted surgical position was the infective lesions of the tube. While he considered that the appendix had reached an assured place in surgery, he considered that the gall bladder had been slow to receive that attention from the medical public which its importance deserved. He compared the similarity between the appendix and the gall bladder, and explained why perforation and sudden death are less frequent in diseases of the gall bladder than the appendix. He showed the relative preponderance of the two conditions according to the age of life of the patient, and also the relative frequency of operations on the appendix, gall bladder, ovaries and tubes and stomach. The 534 operations on the gall bladder and bile passages which formed the basis of this paper were performed on 518 patients, with 19 deaths, a mortality of 3.5 per cent. Of the total number, 510 were for gallstone disease, with a mortality of 3 per cent. Considering stones in the gall bladder as uncomplicated, there were 208 cases with 2 deaths, a mortality of less than 1 per cent. While, in his opinion, the colic is the standard of measure in the diagnosis of gallstones, yet it is but a small part of the clinical picture, and is readily diagnosticated. While it is known that the large majority of adults with gallstones never suffer, it is equally true that these stones only slumber, with the possibility of a painful awakening. The ideal operation, which is complete closure of the gall-bladder incision, has been successful in many of these cases of slumbering stone, while the hope of the patient that the stones will pass down and out through the common duct frequently materializes; usually, according to the author, there were more behind, and he has never operated on a patient who has passed calculi without finding more in the gall bladder. Commenting on the safety of operations on the common duct, he claimed that the mortality depended more on the condition of the patient than any difficulties in the technic, and gave Dr. Robson the credit for the great improvement in the technic. Eighteen times has he met with chronic pancreatitis in connection with gallstone disease, and in four of them cholecyst-duodenostomy was successfully performed, while in the remaining twelve no special treatment was adopted. The average stay in the hospital was slightly less than three weeks, the attempt being to remove all of the stones at the primary operation. Malignant disease of the gall bladder and bile duct was met twenty-four times, in some of which the exact origin could not be determined. As the presence of gallstones only occurred in 15 per cent. of secondary cancers of the gall bladder, and in over 80 per cent. of primary cancers, it was concluded that they were the chief etiologic factors in the production of malignant disease.

Surgical Treatment of Obstruction of the Common Bile Duct by Stone or Tumor.

Prof. Hans Kehr, Halberstadt, looked on the pressure of bile as the chief factor in forcing stones through the duct. He did not think one could determine at the time of the colic whether the stones were large or small, nor whether they passed through the ductus choledochus or not. Acute obstructions of the duct are rare, and sometimes a spontaneous cure may result, but he attached but little importance to the passage of a stone, because there were probably others. If pancreatic trouble be associated with stone in the gall bladder he advised treating this at the same time, but was not in favor of breaking up the stone, as all the broken parts might not pass through. He believed that drainage was more quickly performed than suturing, and felt that in colotomy, with sutures, many stones were left behind. In his opinion the success of the operation depended on the pathologic conditions present. He urged the use of a free abdominal incision, and a generous quantity of gauze packing, believing they played a most important part in the results obtained. While he believed that the treatment of obstruction of the ductus choledochus properly belonged to internal medicine, he advised against waiting more than three months before operating. He did not think an incision into the hepatic duct was very often necessary, but attached great importance to the after treatment following operation.

DISCUSSION.

Dr. **Frank Billings**, Chicago, commented on the fact that surgeons had, in the greater part of the operations done in the last few years, so enlightened us in the diagnosis of these conditions that it can be much more readily made than formerly, but in spite of this, considered it was absolutely impossible to make a rational diagnosis in many cases. The most prominent symptom referred to by present writers is pain, usually in the region of the gall bladder apparatus, not always severe, nor always colicky in character. Points of tenderness may be present without any pain, especially in cases whose abdominal walls are not too thick. Within one year two patients have called on the author, both of whom had been operated on for cystic gallstones without the stones having been found, the condition in each case being that of gastric crises, due to locomotor ataxia. The fact that cases of appendicitis were often operated on for gallstone, and that floating kidney and inflamed appendix may refer pain to the gall bladder region, was briefly noted, and the statement made that in one sense gallstones are harmless, and do not present symptoms sufficient to make a diagnosis until there is infection of the gall bladder region. In the Doctor's opinion, by the time we are able to make a diagnosis of gallstone the case is no longer a medical disease but a surgical one. He emphasized very strongly the fact that if once a diagnosis is made and one can elicit the information that gallstones have repeatedly occurred in the past an operation is indicated and should be performed at once. However he was in favor beforehand of trying to get rid of the infection by proper food, drink, respiratory exercise, and in the case of women by adjustment of the dress, but if these failed he urged operation at once.

Dr. **George Dock**, Ann Arbor, Mich., commented on the fact that nothing but carelessness or ignorance in many cases prevented patients from being sent to the surgeon, and he believed this was largely due to their not knowing the beneficial results to be obtained by surgical treatment. Cases of gallstone disease resemble appendicitis and renal colic, but a careful examination will in most cases clear up the diagnosis satisfactorily. In his opinion, more has been learned from the surgeon than from the pathologist in these cases, largely owing to the fact that many of them do not come to autopsy at all, so that the pathologist does not have an opportunity of studying them.

Dr. **Henry Sewall**, after stating that the bile is a continuous secretion, with rhythmic accelerations due to contraction of the larger bile ducts, said it would be interesting to consider how the bile got into the gall bladder during the intervals between its outpourings into the intestine, which he proceeded briefly to explain. He said it was granted on all sides that the dangers of gallstone disease depend on bacterial invasion of the gall bladder and gall ducts, and that the formation of gallstones may presuppose such invasion. Commenting on the entrance of germs from the intestine, the sphincter muscle of the duct must form a useful barrier, but germs must be constantly penetrating the common duct, and once in the duct they must find ready access to the gall bladder, except for the possible filtering power of the Heisterian valve in the cystic duct. He supposed it was well known that all factors restricting the free outflowing of bile (dress, habits of eating, etc.) predisposed to gallstones, and also if the bile, when secreted by the liver, is already infected, it can not serve as a cleansing fluid. In his opinion, a prominent or principal use of the gall bladder is to serve as a flush tank for the common and cystic duct, and it maybe suspected that atrophy or extirpation of the gall bladder might predispose to cholangitis.

Dr. **E. G. Janeway**, New York, urged that the character of the food taken should be under the control of the physician.

Prof. **B. S. A. Moynihan**, Leeds, England, stated that although operations on the common duct used to be considered extremely serious, they were not losing at the present time more than 3 or 4 per cent., and he attributed this improvement to the kind of incision which is being used, through which one is able to see the gall bladder and pull out through the wound about one third of the liver. He expressed considerable satisfaction from this little detail in the operation, and claimed to be able to operate on the common duct in twenty to thirty minutes. One is being driven often and oftener to an inspection of the gall bladder, making it necessary to employ an incision which would permit of this.

(To be continued.)

FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

Held at Madrid, Spain, April 23-30, 1903.

(Continued from page 1525.)

Section on Medicine.

The second session was completely monopolized by long communications from physicians belonging to the Latin races, dealing largely with diseases endemic in Southern Europe, and the discussions were carried into the other sessions. Maragliano, Genoa, Italy, the honorary president of the section, called attention to the fact that the congress was losing its true character as an international gathering for the rapid and concise interchange of views, but his words were without effect. Drs. Espina and Castellino, Naples, reviewed the current opinions in regard to the "Pathogenesis of Cardiac Arrhythmia."

Several of the papers presented in the third session have already been mentioned. Dr. Sanudo, Madrid, discussed the subject of the "Diagnosis of Myocarditis," but presented no new ideas.

Radiography in Biliary Lithiasis.

Drs. Gasteln and Yogue, Madrid, reported that they had radiographed a large number of cases, subsequently submitting their findings to the control of operation or autopsy. They found that radiography does not permit of differentiation between stones in the gall bladder and dense pericystic adhesions or hydatid cysts. Thus it fails just where its aid is most needed.

Rheumatism.

Dr. Ibanez, Valencia, asserted that rheumatism is not of microbic nature, but due to faulty metabolism with accumulation of uric acid. All the forms of rheumatism and gout are manifestations of the same disease.

In the fourth session Dr. Princos, Saragossa, reviewed the present standpoint with regard to pleurisies.

Salocreol.

Dr. Guezda, Berlin, said that the new drug was a synthesis of the various phenols of creosote and salicylic acids to form an ester. In von Leyden's clinic it has proven of great value in the treatment of rheumatic joints, of scrofulous glands and of the adenopathies of measles and scarlatinal anginas. It is applied with a brush or rubbed in as the degree of tenderness of the parts dictates, and thus applied appears in the urine in a few hours. Its chief value is in reducing or abolishing the tendency to suppuration of the acute and chronic glandular swellings, and has established its efficacy as the best drug in erysipelas.

Therapeutic Action of Air Baths and Sun Baths.

Dr. Singer, Berlin, described the physiologic action of this treatment, which is both tonic and sedative. It is applicable in a large number of conditions, but chiefly in neurasthenia.

Dr. Mariani, Madrid, spoke on the "Curability of Tuberculosis," and Dr. Iglesias on what he called "Madrid Fever." Dr. Mariani also discussed "Hysteria as an Agent in the Production of Aortic Lesions."

He further called attention to the value of "Blood Enemas in Chlorosis." He stated that he had experimented for 20 years in the treatment of anemias by this method. It is ineffectual in symptomatic anemias, but in chloranemias of the most advanced type, which have resisted every other form of treatment, it gives invariably good results. The blood of a sheep, aseptically secured, fresh each day, and defibrinated, is injected in amounts of 300 c.c. There are never any toxic or intestinal disturbances, but the enemas are followed by a rapid improvement in all the symptoms, paralleled by the tendency to normal of the blood count. Moreover, the cure is lasting. The manner of absorption of the blood is still unexplained.

Rectal Injections of Antistreptococcus Serum.

Sir Dyce Duckworth, London, described a typical case of acute infectious endocarditis, with fever, chills, petechial rash and joint symptoms, which yielded to this form of treatment after every other method had proven fruitless.

Etiology of Acute Rheumatism.

This communication by Drs. Poynton and Paine, London, will be reviewed later.

Dr. Larand, Carlsbad, emphasized its great importance. He is inclined to accept the conclusions presented. Dr. Singer, Vienna, stated that the so-called diplococcus referred to was identical with a streptococcus which he had isolated two years ago, but had found that it was not specific. Dr. Blumenthal, Berlin, said that agglutination and immunization occurred only with the specific form of streptococcus originally employed, and not with others. There was no one streptococcus of rheumatism.

Dr. Moragas, Madrid, discussed the treatment of hemoptysis.

Mucomembranous Colitis and Appendicitis.

Dr. F. Bernard, Plombières, has collected 1,100 cases of mucomembranous colitis, of which 76, or 6.9 per cent., presented unmistakable evidence of appendicitis, while many others had probable symptoms. In 12 cases removal of the appendix was followed by cure of the colitis. Ordinarily, the syndrome of appendicitis is present, but not marked, and the symptom-complex might be characterized as "appendicism." Pathologically it is reasonable to assume that the mucosa of the appendix participates in the disease present in the cecum and colon; the coexistence of enterolithiasis is also probably an etiologic factor in the appendicitis.

Pseudo Uremia in Urinary Lithiasis.

Dr. Galland Gleize, Vittel, said that he had observed cases of "gravel" of long standing, in which there occurred, with more or less suddenness, attacks which in many points simulated a true uremia. Examination of the urine, however, gave no support to the theory of a nephritis. The attacks were marked by a predominance of gastrointestinal symptoms; they usually lasted much longer than is customary in uremic attacks and terminated abruptly. The termination was marked by an abundant elimination of sand and calculi. He concludes that the phenomenon is simply a form of nephritic colic of gastrointestinal type.

Dr. Melcior, Levida, recommended the treatment of cholera with quinin.

At the conclusion of the session telegrams expressing gratitude were sent to the men who have contributed so much to the elucidation of the etiology of malarial infection, Laveran, Baccelli, Manson, Grassi, Koch and Ross.

(To be continued.)

PHILADELPHIA ACADEMY OF SURGERY.

Special Meeting, held May 11, 1903.

The president, Dr. Richard H. Harte, in the Chair.

Mayo on Stomach Surgery.

Dr. William J. Mayo, Rochester, Minn., read a paper entitled "A Review of 303 Operations on the Stomach and First Portion of the Duodenum," 286 of which were taken from the records of St. Mary's Hospital, Rochester, Minn., and 17 from the Minnesota State Hospital for the Insane at Rochester and St. Peter. The average age was 42, 42 per cent. being males and 58 per cent. females. There were 26 cases of duodenal ulcer with two deaths. Lesions in the first portion of the duodenum can not be easily differentiated from lesions in the stomach which are due to the same causes.

He divided lesions in the first portion of the duodenum into two groups, first, those caused by ulcer; and, second, those associated with the gall-bladder disease. Of the ulcers limited to the duodenum, there was 1 acute perforating, 2 chronic perforating, 5 active and 3 cicatricial contractions with obstructive symptoms. Two deaths occurred, one from pneumonia and the other from exhaustion following gastroenterostomy.

DISEASES OF THE STOMACH CLASSIFIED.

Dr. Mayo divided the gastric affection into two classes:

1. Gastric ulcer and associated causes of serious disturbance.
2. Cancer of the stomach.

Out of the 303 cases reported in this paper 277 involved the stomach, with 28 deaths, or 10.1 per cent.; 168 of these cases were in the benign group with 11 deaths. These cases included all the non-malignant obstructions or conditions calling for operation for gastric pain, with or without acute exacerbation. In the majority of the cases the perverted stomach secretion seemed to be the most important cause, which is shown by the almost constant association of excessive secretions with gastric ulcer. Also in that part of the duodenum not protected by alkaline juices the same ulcers have occurred after jejunostomy has been performed for the purpose of drainage. Drainage to relieve the excessive amount of secretion and thus produce healing of the ulcer is of great importance.

GASTRIC ULCER CLASSIFIED.

The following classification of gastric ulcer was made:

1. Round ulcer: (*a*) acute; (*b*) chronic. They have the definite feature that there is but little thickening about the base of the ulcer.
2. Mucous erosions, a condition which must be accepted with caution.
3. Chronic ulcer with thickened base and usually irregular in form.
4. Benign obstruction without regard to cause, although usually of benign origin.

The last two classes are the ones which most frequently call for operation, chronic ulcer being usually found in adults and is more frequent in females. Spasm of the pylorus was thought to be one of the most important causes of the retention of excessive gastric secretion.

There were 109 cases of cancer of the stomach, with 17 deaths, or 15.6 per cent. Late diagnosis and cachexia make the report of this group rather discouraging; most of the operations were of a palliative character. Early exploratory incision in suspected cases was recommended, and all the vascular and lymphatic connections with the diseased area should be removed. He then gave a full description of the method he employed in doing the operation.

Difficulty of Diagnosis.

Dr. Albert Vander Veer, Albany, referred to the difficulty of diagnosing conditions in the lower third of the stomach and the upper third of the duodenum. He felt that many of the cases were left too long solely under the treatment of the medical man, and when the clinical history and examination of the patient do not reveal clearly the conditions present he recommended exploratory operation.

Murphy Button Versus Suture.

Mr. B. G. A. Moynihan, Leeds, England, felt that the operation of pyloroplasty could be practically abandoned, he having done the operation three times, and in only one of the three cases did it prove satisfactory. He did not feel that the operation was in any particular as satisfactory as the operation of gastroenterostomy, stating that he had operated on seventy-five cases by the latter method with only one death. He stated that he had not used the Murphy button in the last sixty-five cases, as he believed the simple suture was preferable, but stated that in the employment of the Murphy button in the first of his cases, he had noticed that it destroyed a considerable portion of the mucous membrane around the union, which he considered of very great importance, and which he had been doing in all his operations. By the method which he has employed the section of the stomach and the section of the jejunum where the anastomosis is to be made are each grasped in a pair of forceps and brought outside of the abdomen, and the continuous suture applied. Malignant disease of the stomach he believed came principally through the lymphatic system, and in the operation therefor, he believed that first the greater curvature and then the lesser curvature should be removed. Duodenal ulcer he believed to be rarely primary. Gastric ulcer is so frequently multiple that he did not believe excision thereof to be practicable, as future trouble may result from a remaining undiscovered ulcer.

Importance of Early Treatment.

Dr. J. B. Murphy, Chicago, said the great majority of all cases of carcinoma occur in the pyloric end of the stomach, and as the first set of glands to become involved by gravity are the lymphatic glands, any operation which is expected to produce permanent results must look to the removal of these glands, early operation being imperative. About 10 per cent. of all cases of gastric carcinoma occur in the cardiac end and are practically unamenable to treatment. The surgeon usually sees the cases of gastric disease numerically in the following order: (1) gastric carcinoma; (2) gastric ulcer; (3) pyloric stenosis, and (4) pyloric retention. As the gastric carcinoma is usually a sequence of the other conditions, he felt that in order to obtain the best results by operative treatment, the order in which these cases were seen should be the reverse He believed that in order for the operation of pylorectomy to attain the best possible results, it was necessary that it should be done early. He referred to the fact that the cases of gastroptosis are treated erroneously by the medical man by washing out the stomach and reducing the amount of food, on the theory that the condition is due to a weakening of the wall of the stomach, whereas, as has been definitely demonstrated by Dr. Mayo, it is due to a mechanical condition at the pylorus. He felt that the all-important factor in the operation was to secure permanent drainage of the most dependent portion of the stomach, and the only operation which had been used a sufficient length of time to justify the statement that it was the best he felt was gastroenterostomy. He felt that if pyloroplasty was going to be of benefit to the patients it must be done early, in order to avoid ulceration and changes in the gastric secretions which are apt to lead on to malignant disease. He also expressed the opinion that so soon as it became demonstrated to the physician that surgical operations were safe and afforded great relief, the cases would be sent to the surgeon much earlier

Dr. J M T Finney, Baltimore, believed that the main question was thorough drainage, and any method that would produce this result he felt would be satisfactory. He advocated early exploratory operation under cocain.

Prof. von Mikulicz Radecki, Breslau, Germany, spoke in German on the subject.

On motion a unanimous vote of thanks was tendered those who had spoken

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AMERICAN PROCTOLOGIC SOCIETY.

Fifth Annual Meeting, held in New Orleans, May 5 and 6, 1903.

The President, Dr. S. T. Earle, Baltimore, in the Chair.

After the transaction of preliminary business, President Earle delivered an able address on "The Qualifications for Membership in the American Protologic Society."

The papers presented at this meeting were of unusual interest.

X-Ray Therapy in Ano-Rectal Diseases.

Dr. J. Rawson Pennington dwelt in this paper on the importance and efficiency of this agent in the treatment of pruritis ani where the cause is local.

The society asked Dr. Pennington to continue his searches in *x*-ray therapy in rectal diseases.

Tubercular Ulceration of the Rectum and Anus.

Dr. L. H. Adler, Philadelphia, stated that tuberculosis is now recognized as the cause of a number of conditions about the anus and rectum, the pathology of which was formerly obscure. The disease may be a primary process, but in the majority of instances it is secondary to similar changes in other organs. It may involve any portion of the rectum or the skin about the same; its most frequent site, in the author's experience, however, is at the mucocutaneous junction. The affection is always due to the tubercle bacillus. Any plan of treatment, to be of benefit, must, in a large measure, be directed to the general constitutional condition; and for this purpose, pure air, forced feeding and all the hygienic and medicinal measures should be adopted as are employed in general tuberculosis. The local treatment has for its main objects the destruction of the tubercle bacilli and the establishment of a healthy reparative process. The Paquelin or the galvano cautery, chemical caustics, such as chlorid of zinc, nitric acid and acid nitrate of mercury, the curette and the *x*-ray, have been employed for these purposes and with varying results.

Dr. Leon Straus, St. Louis, reported cases of primary tuberculosis of the rectum.

Atony of the Rectum and Anal Sphincters; Its Etiology, Pathology, Diagnosis and Treatment.

Dr. William Bodenhamer, New York, said the condition is most commonly met in delicate women of a lax muscular fiber, and in those whose sedentary occupations lead to a lack of regularity of function. The first desideratum in treatment is a regular habit respecting a daily evacuation of the rectum. "This may be aided and often attained by simple means, such as the injection of half a pint of cold water into the rectum at the regular time of going to stool; cold being tonic, stimulant and astringent and acts somewhat similarly to nux vomica by exciting the sensibility and contractility of the organ; but it should be discontinued as soon as the object of its use has been attained. In the more obstinate cases, however, the chief remedies should be nux vomica, alone or combined with some other ingredients, together with the employment of rectal injections composed of powerful astringents and tonic substances, with the intention of inducing contraction, corrugation and condensation of the relaxed and weak muscular fibers of the rectum, by which they become shorter and firmer, and thus aid in diminishing the morbid organ to its normal dimensions and tone."

Obstipation.

Dr. John L. Jelks, Memphis, Tenn., read a paper entitled "Obstipation, Its Causes, Effects, Diagnosis and Treatment." He stated: "Obstipation is the term used by proctologists to denote mechanical obstruction of the bowel, and is preferred to the generic term of which obstipation is one variety." He classed the causative factors as follows: 1, Extravisceral; 2, perivisceral; 3, visceral; 4, intravisceral. One of the chief facts which the author wished to forcibly express is that other factors may and do cause obstipation or obstructive constipation, and a careful discrimination should be made before an operation is performed on a supposed obstructing rectal valve.

Dr. B. Merrill Ricketts, Cincinnati, exhibited an instrument, and Dr. George T. Cooke, Indianapolis, discussed the subject of "Hemorrhoids." These elicited considerable discussion, and Dr. Ricketts was instructed to make further report on the use of the angiotribe in the treatment of hemorrhoids. The discussion disclosed the approval of various methods of treatment of hemorrhoids, but showed that none of them are ideal.

The Treatment of Anal and Rectal Diseases Without General Anesthesia.

Dr. William L Dickinson, Saginaw, Mich., said: "The treatment of anal and rectal diseases has been so long associated with that of general anesthesia that when a patient presents himself and we have made an examination we unconsciously begin to solve the mental problem of how he will take the anesthetic and the number of days he will be confined to the house after the operation. The time-honored treatment of anal fissure by dilation, under chloroform, was both effective and speedy, but we can accomplish the same results in a little longer time by the use of cocain or eucain. Superficial fistulæ, ischio-rectal abscesses, external hemorrhoids and many cases of internal hemorrhoids can be operated on under filtration just as well as under general anesthesia. We owe it to our patients and also to ourselves to keep patients from going to the irregular practitioner, for, as regular, educated physicians, we ought to be able to cope with all diseases of the rectum, in an intelligent manner, and thus give entire satisfaction to our patients. Our students should be taught that the greater number of our patients seek our advice and aid for ailments that respond readily to office treatment that can be given without general anesthesia."

Molluscum of the Rectum.

Probably the most interesting paper of the meeting was that of a report on "A Unique Case; Molluscum Fibrosum of the Rectum in a Patient, the Subject of the Typical Skin Lesion," by Dr. A. Bennett Cooke, Nashville. He stated: "The feature of the case which justifies the adjective 'unique' is not the skin disease nor the occurrence of the multiple fibroid tumors in the rectum, but rather the association of the two conditions in the same individual and the further fact that the mucous and cutaneous tumors are identical in structure." He described the patient as emaciated, sallow, nervous and despondent; at least a dozen calls to the stool in twenty-four hours; sphincters relaxed and perianal integument excoriated from the irritating discharges; anal canal patulous, in spite of numerous successive abrasions. The proctoscope revealed the rectum almost completely filled with polypoid tumors, many of them ulcerated and bathed in a muco-purulent blood-stained secretion of exceedingly offensive odor. The growths began in the lowest rectal chamber, varying in size from a bird shot to an almond; the largest were uniformly pedunculated, those intermediate in size had sessile attachments, and the smallest appeared as mere elevations under the mucous membrane, well bedded. It was found that the lesions extended well into the sigmoid colon, smaller in size, and were attended by less inflammation of the mucosa. Beginning below the tumors were removed by torsion with the forceps and by biting them off with a curette against the sharp end of the proctoscope. The hemorrhoid was rather free, so that it was possible to remove only a small number at a sitting. The operation was repeated from time to time during a period of three weeks, when the bowel, as high as could be seen, was clear of all but the smallest tumors. Sixty of the growths were removed; no anesthetic was employed."

Dr. Cooke appended a report from the *Pathologist*, which demonstrated the identity of the skin and rectal lesions. The production was considered a valuable contribution to proctologic literature.

Election of Officers.

The society elected the following officers for the ensuing year: President, Dr. William M. Beach, Pittsburg; vice-president, Dr. Leon Straus, St. Louis; secretary-treasurer, Dr. A. Bennett Cooke, Nashville.

The next meeting will be in Atlantic City, June 7 and 8, 1904.

AMERICAN ACADEMY OF MEDICINE.

Twenty-eighth Annual Meeting, held in Washington, D. C., May 11 and 12, 1903.

(Continued from page 1529.)

The President, Dr. Charles McIntire, Easton, Pa., in the Chair.

Gonorrhea as a Social Danger.

The scientific session was opened on the second day by a paper with this title by Dr. Prince A. Morrow, New York. A distinction should be recognized between cases in which the disease is contracted through voluntary exposure to contagion under immoral conditions and those in which contagion is conveyed through innocent relations. Modern acquisitions to knowledge, especially of gonorrhea in women, have established on a scientific basis the magnified importance of gonorrhea as a social peril. The extent and degree of this danger, Dr. Morrow claims, are not sufficiently appreciated by the profession.

The paper considered the principal modes in which gonorrhea of the innocent may be manifest as a result of marital infection, and detailed the remedies, emphasizing the protective duty devolving on the physician.

The paper was discussed by Drs. Gerrish, Benedict, Bulkley and Risley.

Electives in Anatomy.

The "Symposium On Required and Elective Studies in the Medical Course" was then opened by Dr. F. H. Gerrish, Portland. A knowledge of the structure of the entire body is fundamentally important, the author stated, for the medical man, even if his work is in a limited field, for he can not be the best kind of a specialist unless he is an all-round practitioner at the start, and it is injudicious to encourage the undergraduate to undertake additional anatomic work. Electives, he claimed, are appropriate for those who have attained the doctorate, and wish to broaden and deepen their knowledge in particular lines.

The Teaching of Pathology in the Medical Curriculum.

Dr. William H. Welch, Baltimore, in this paper, considered the period in the medical course for teaching pathology; the apportionment of laboratory work and didactic teaching; recitations and conferences; the extent to which various branches of pathologic teaching may be combined in single course; the character of examinations, and the methods adopted at the Johns Hopkins University. The student should have a good training in microscopic anatomy and histology and a training in physiology in order to enable him to take up with any profit the study of pathology, and he should keep in touch with pathology during the remaining years of his course.

It has been found advantageous to separate the more immediate and direct practical applications of pathology to clinical medicine from the course in the second year and to transmit it to the third and fourth years of the course. The plan is to begin with bacteriology and keep it in close relation with histology or pathology. Didactic lectures are not dispensed with, but go in as they are needed in connection with the course. Disturbance of circulation, disturbance of normal heat, etc., which do not admit of demonstration very readily, are taken up in their proper connection in a series of lectures in connection with the diseases of circulation.

Regarding the matter of electives, Dr. Welch regards the statement of Dr. Bowditch as the most comprehensive; the first essential being to fix on a minimum in the subject which must be taught, that is, every student must have this minimum knowledge of pathology. The difficulty comes in determining the minimum. That, however, is the plan in operation in Johns Hopkins University. The amount of teaching has been lessened and courses established which are elective in pathologic anatomy, histology and the different departments. Dr. Welch is therefore very much in favor of endorsing the system of electives so far as is possible along the lines elaborated by Dr. Bowditch, so far as he knows them: Determining the minimum requirement in a given subject and then supplying special courses along the different lines, the advantage of this being the well-recognized advantage of optional interchange and also the distinct advantage of taking up one aspect with very great thoroughness, none of which is opposed to Dr. Gerrish's conception that, after all, the main purpose of the medical school is to train medical practitioners. This plan Dr. Welch regards as really conducive to that end.

Internal Medicine: To What Extent Required or Elective in the Medical Course?

Dr. Sherman G. Bonney, Denver, gave a few general fundamental considerations relative to the present professional and educational status and discussed some of the recent advances in the methods and character of medical instruction. He gave the definition and scope of the elective system in American medical colleges and the objection to its too general application. The relation of internal medicine to the elective system of instruction is regarded as unique and distinctive.

Required and Elective Dermatology.

Dr. L. Duncan Bulkley, New York, in this paper, said that diseases of the skin are notoriously among those about which the least is known by the general medical profession. While many of the colleges have special instructors in this branch, it has not hitherto been taught so as to efficiently inform graduating students. Proper knowledge of dermatology is often most important in general practice, especially in the case of syphilis and the exanthemata, while many of the ordinary diseases of the skin are exceedingly important in their bearing on the health and usefulness of the patient. In order to properly understand the subject of dermatology, which is essentially a clinical branch, Dr. Bulkley claims that there should also be a good knowledge of microscopy and bacteriology. Those contemplating special practice in dermatology should be encouraged to take special courses as electives during the last two years.

A Theory and a Condition as Illustrated by Ophthalmology.

DR. EDWARD JACKSON, Denver, read this paper. He stated that the time-honored theory of one course of undergraduate study, with gradual development years after graduation toward special from general practice, does not now meet the requirements of ophthalmology. Special training should begin in the course preparatory to medicine to attain the best practical results, and a certain part of ophthalmology should enter into the training of every medical student Certain other things, however, should be taught early in their student career to those who expect to practice ophthalmology. A wise recognition of electives in the medical curriculum may prevent the complete separation of certain specialties from the general practice of medicine and surgery.

DISCUSSION.

DR. BOWDITCH agreed with Dr. Gerrish that the general practitioner has not yet gone by, stating that he would be with us for many years. He also believes with Dr. Gerrish that the elective system affords the best means for training general practitioners. *In the Harvard Medical School* all the required instruction is condensed into three years.

DR. EDWARD JACKSON spoke of the educational value of the electives. He believes that whether a man is in general practice or in any line of practice, his first object as a practitioner of medicine should be that of original investigation.

How the Modern Physician Can Influence in Decreasing the Birth Rate.

DR. ROLAND G. CURTIN, Philadelphia, in this paper, pointed out that this decrease could be brought about, first, by increasing the expenses of the family in high charges, expensive nursing and extensive outfits; and second, by discouraging advice.

The New Officers.

The following officers were elected: President, Dr. John B. Roberts, Philadelphia; vice-presidents, Drs. T. D. Davis, Pittsburgh, Pa.; James H. McBride, Pasadena, Cal.; J. T. Searcy, Tuscaloosa, Ala.; S. A. Knopf, New York; secretary, Dr. Charles McIntire, Easton, Pa.; treasurer, Dr. E. M. Green, Easton, Pa.; assistant secretary, Dr. Alex R. Craig, Columbia, Pa.

Atlantic City was named as the next place of meeting.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen *especially in every-day practice.* Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Diabetes.

A. Robin, *according to an abstract in the Courier of Med.*, recommends in the treatment of diabetes, that grains 15 (1.00) each of antipyrin and sodium bicarbonate be taken one hour before dinner and supper. The amount of sugar excreted daily will, under this treatment, rapidly be reduced to 50 per cent. of its original amount. This treatment should be continued for three days, when it should be replaced by the bihydrochlorid of quinin in ten-grain doses (.60) on rising, which should be repeated for six days, alternating with the following:

℞.	Sodii arsenatis	gr. 3/4	05
	Aq. destil.	℥i	30

M. Sig.: One teaspoonful before each meal.

Lithia carbonate may also be given in three-grain (.20) doses three times a day before lunch, or sodium citrate in two and a half grain (.15) doses before each meal. Sodium tartrate *may* be ordered instead of the above salts, in doses of grains six (.40) each.

In cases where nerve sedatives are indicated give the following:

℞.	Ext. bellad.	gr. 3/40	005
	Ext. opii	gr. 1/6	01
	Ext. valerianæ	gr. iiss	15

M. Ft. pilula No. i. Sig.: Three to ten such pills daily.

Coryza.

Dr. G. Bjorkman, in *Merck's Archives*, recommends the following combinations in the treatment of coryza in the early stages:

℞.	Quin. muriatis		
	Camphoræ, āā	gr. 1/4	015
	Ext. belladon. rad. flu.	gtt. 1/8	008

M. Ft. capsulæ No. i. Sig.: One such capsule every fifteen minutes until relieved; or:

℞.	Ext. suprarenalis aq.	gr. xv-xlv	1.-3
	Aq. destil. steril.	ʒiiss	10

M. Sig.: To be applied to the nasal mucous membranes several times a day with a brush; or:

℞.	Menthol	gr. xxx	2
	Spts. chloroformi	℥ss	15

M. Sig.: Twelve drops to be dropped into the palms of the hands and rubbed until most of the chloroform has evaporated. The hands should then be formed into a mask and the vapors inhaled for five or ten minutes, every half hour; or:

℞.	Ext. hamamelidis aq.	℥i	30
	Sol. acidi borici (1 per cent.)	℥i	30

Sig: A small amount added to a teaspoonful of water to be snuffed into the nose repeatedly; or:

℞.	Zinci sozoiodol	gr. xxx	2	
	Menthol	gr. ivss		25
	Sacch. lact.	℥i	30	

M. Sig.: To be insufflated into each naris several times a day.

The Dose of Codein.

According to Fraenkel, in *Munch. Med. Woch.*, the dose of codein should be larger than the dose ordinarily given in order to obtain the full physiologic effect of that preparation. It is twenty times less powerful than morphin. It should be given in doses ranging from 2/3 gr. (.01) to 3/4 gr. (.05), repeated three or four times a day. The single maximum dose may reach grain 1½ (.09) and the maximum daily dose 4½ grains (.28). In administering it to children the following daily dose may be allowed: Age four years, gr. 1/6 (.01); age six years, gr. 1/3 (.02); age eight years, gr. 2/3 (.04); age twelve years, gr. 1¼ (.075).

Scabies.

The following ointment, which is similar to that formerly employed by Kaposi, is recommended in the treatment of scabies:

℞.	Naphthol	ʒiv	15	
	Saponis viridis	℥iss	45	
	Pulv. cretæ	gr. xl	2	65
	Adipis	℥viii	240	

M. Ft. unguentum. Sig.: Apply locally, dust with starch powder and wrap in a linen cloth.

The following combination is recommended by Local Handbook of Ther.:

℞.	Naphthol		
	Sulphuris precip., āā	℥i	30
	Adipis	℥viii	240

M. Sig.: Apply locally after scrubbing the parts well with soap and water.

Constipation.

Gant, in the *N. Y. Med. Jour.*, states that he has discarded rugs entirely in the treatment of constipation, and by employing the following outline of treatment his results are positive in all cases: Massage is essential in the cure of constipation, attention being directed not only to the large intestines but to the liver, small intestine and rectum. It improves the circulation, loosens any adhesions present and increases peristalsis. Faradism is of great value, applying the positive pole over the spine or within the rectum and moving the negative over the abdomen and liver.

Enematas of warm soapsuds are sometimes necessary to relieve an overloaded colon. The patient is given the following instructions:

1. Go to stool at the same hour each day and make a strong effort to move the bowels, whether successful or not.
2. Correct errors in diet; be regular about the meals and masticate the food thoroughly.
3. Eat sufficient fruit and drink an abundance of water, especially on rising.
4. Take a cold bath every morning, to be followed by thorough friction.
5. Regular indulgence in outdoor exercise and gymnastics, *paying special attention to those movements which tend to* develop the abdominal muscles.
6. Change from a sedentary to a more active occupation if it is deemed necessary.

Seborrhea.

Seborrhea, *according to* Shoemaker *in Med. Bul.*, requires constitutional as well as local treatment. If gastrointestinal disturbances are present the bowels must be kept properly active and bitter tonics administered. Iron should be given when anemia or chlorosis is present. Seborrhea is most frequent on the scalp; however, the hair should not be cut short but some bland oil should be applied to remove the crusts. The use of tobacco must be avoided and oatmeal, fish, pastry and fried foods cut from the articles of diet. The patient may eat baked potatoes, eggs, beefsteak, lamb chops, baked or stewed fruits and roast beef once a day. He should eat no supper.

The following should be given internally:

℞.	Podophyllotoxin		
	Ext. belladonnæ		
	Ext. nucis vom., āā	gr. 1/10	006
	Ext. taraxaci	gr. i	06
	Pepsini puri	gr. ss	03

M. Ft. pil. No. i. Sig.: One such pill four times a day.

The following ointment should be applied locally after the crusts have been removed:

℞.	Chloralis hydratis.	gr. xv-xxx	1.-2	
	Olei eucalypti	m. v		30
	Magnesii carb.			
	Zinci carb., āā	ʒss	2	
	Ung. aq. rosæ	℥i	30	

M. Ft. unguentum. Sig.: Apply locally.

According to the author the chloral is soothing, antipruritic, and aids in *contracting the follicles.*

Sedative in Neurasthenia.

The following combination, recommended by Lewis in *Amer. Med.*, is of service in quieting the nervous symptoms of neurasthenics:

℞.	Potassii *bromidi*	ʒiv	15
	Tinct. ferri chloridi	ʒiii	12
	Glycerini	ʒii	8
	Aq. q. s. ad	℥iv	120

M. Sig.: One teaspoonful to be taken in half a glass of water and repeated as often as necessary in order to decrease the pains and produce sleep.

Migraine.

In order to lessen the suffering from an acute attack of migraine the first essential, according to the *Med. News*, is absolute rest in a darkened room. Heat should be applied locally to the feet and a mustard poultice to the back of the neck, and the head well wrapped in a shawl. Tea and coffee should be avoided, and if the patient has a tendency to a gouty diathesis colchicum should be given, or if rheumatic the salicylates or aspirin, alternating with sodium bromid. The eyes should be examined and the teeth cared for. If an attack occurs during menstruation a sitz bath should be taken and the following given internally:

℞.	Spts. chloroformi		
	Spts. ammon. arom.		
	Tinct. card. co., āā	ʒii	8
	Liq. ammon. acet. q. s. ad	℥iii	90

M. Sig.: Two teaspoonfuls and repeat in two hours if necessary.

Citrophen, according to the author, acts admirably in some of these cases.

When nausea and vomiting are present the following mixture is suggested:

℞.	Tinct. zingiberis	ʒi	4	
	Tinct. capsici	m. xxxvi	2	40
	Syr. zingiberis	ʒiv	15	
	Aq. menth. pip. q. s. ad	℥iii	90	

M. Sig.: Two teaspoonfuls and repeat as necessary.

In the gouty form the following is valuable to give relief:

℞.	Antipyrini	ʒi	4
	Sod. salicylatis	ʒiss	6
	Aq. cinnamomi q. s. ad	℥ii	60

M. One teaspoonful every hour until relieved.

Or, according to Merck, the following:

℞.	Quin. valerinatis	gr. xv	1	
	Ext. colchici			
	Ext. digitalis, āā	*gr. iv*		25
	Ext. aconiti	gr. ii		12

M. Ft. pil. No. x. Sig.: One at noon and night.

If neuralgic in character the following is recommended:

℞.	Antipyrini		
	Butyl-chloral hydratis, āā	ʒii	8
	Syr. *zingiberis*	℥ii	60
	Aquæ	℥i	30

M. Sig.: One teaspoonful every two to four hours.

Decubitus.

The following in *Merck's Archives* is recommended by Bjorkman *in the treatment of bedsores: The points of pressure* should be properly protected by pads and air cushions. Absolute cleanliness is imperative. The sheets should be removed frequently and aired once or twice a day; remnants from meals should never be permitted to remain in the bed. When dejecta come in contact with the patient, the parts should be thoroughly cleansed antiseptically and astringent lotions applied. The following lotion serves well as a preventive measure:

℞.	Aq. hamamel. dest.		
	Spts. vini, āā	℥iii	90

Sig.: Apply locally.

The author recommends light massage as a stimulant to the sluggish circulation. If sloughing should occur one of the following combinations may be used:

℞.	Nosophen	ʒi	4
	Lanolini	℥i	30

M. Ft. ung. Sig.: Apply locally; or:

℞.	Potass. sozoiodol	ʒiiss	10
	Lanolini		
	Liq. petrolati, āā	℥iss	45

M. Ft. ung. Sig.: Apply locally.

Medicolegal.

Rules for Weighing Expert Testimony.—The Supreme Court of Nebraska, in Modern Brotherhood of America vs. Cummings, holds not erroneous an instruction in which the jury were told that in weighing expert testimony the same test was to be applied in weighing other testimony, and which continued as follows: "In weighing expert testimony, it is important that you should consider whether the fact on which the opinion of the witness is given has been satisfactorily proven—whether the expert is in any way biased and prejudiced, as shown by the evidence. You should also consider what experience, skill and learning in his profession the expert is shown to have. In weighing expert testimony offered for the purpose of contradicting the testimony of other witnesses who have positively stated facts claimed by them to have been within their personal knowledge, you should not fail to distinguish between those inferences or conclusions of the expert which are shown to be only probable and generally true, and which have their exceptions, and those other inferences and conclusions, if any, which are necessary and invariable, and which have no exceptions. You should also consider whether the opinion of the expert is speculative, theoretical, and states only the belief of the witness, while yet some different opinion, conclusion or inference may be drawn from the same facts." As to the question of whether the arm of the party by whom the action was brought was broken or not, which was in dispute, the jury were told that it was not for the expert to determine, but was alone for them to determine from all the testimony in the case.

Hastening Death by Inflicting Wound on Diseased Person.—Briefly summed up, the Court of Criminal Appeals of Texas says that the physicians' testimony in Gardner vs State, a homicide case, showed that the deceased was in the last stages of Bright's disease, his elbow broken by a pistol shot; chloroform administered for the purpose of surgical operation, the kidneys, paralyzed by means of the chloroform, and failing to perform their functions, threw uric acid back on the system by poisoning the blood, thereby causing death The physicians also testified, in this connection, that this was the proper treatment under the peculiar circumstances, and that the operation was a necessity Whether the life of the deceased could have been saved by some other means than the operation, or whether there was negligence in this connection or improper treatment in not investigating the condition of the deceased's kidneys prior to the operation, does not seem to have entered into the testimony The accused, who fired the shot, asked an instruction to the effect that if the deceased was shot, but the wound thereby inflicted was not necessarily fatal, and the wounded party was suffering from or afflicted with a disease not connected with or superinduced by the shot, and died therefrom, then the accused should be acquitted altogether of any grade of homicide. This charge was refused, and the court holds that it was properly so. It holds that if the deceased was suffering from a disease or a wound, and the accused's shot hastened the death of the deceased, he would be guilty of homicide. If the deceased would have shortly died from Bright's disease, and it was an incurable malady, yet if the accused's shot assisted in bringing about the death, he would be guilty of the homicide. An accused can not speculate as to how long his victim may live with an incurable malady when he inflicts a shot or a wound that hastens the death or the action of the fatal disease.

What Physician May Recover When Own Child Injured.—The Court of Civil Appeals of Texas says, in St. Louis Southwestern Railway Company of Texas vs Gregory, that physical or mental pain suffered by an infant, by reason of personal injury or wrong inflicted by the negligence of another, is not an element of damages which the parent is entitled to recover, but the right to recover damages for such pain is personally of the infant If, however, the pain which the child suffers is such as to incapacitate him for services to his parent, the latter will be entitled to recover damages, not for the pain, but as compensation for the loss of services caused by the pain to the child Though an infant be injured, there is no right to recover by the parent therefore, unless the injury be such as to cause loss of services, or require, at the hands of the parent, some expense or outlay that otherwise would not have been made necessary. Medical services, and all necessary expenses of the care and treatment of a child whose injury or sickness is caused by the negligent or wrongful act of another, are elements of damages arising from such negligence It is not necessary that the parent engage a stranger to administer medical treatment to the child, if the parent himself is a physician competent to perform such medical services If he performs such services, he is entitled to recover from the wrongdoer a reasonable compensation therefore, for such wrongdoer has made it necessary because of his wrongful act. But the recovery by the parent should not exceed the value of the services performed. He can not recover for the loss of patronage as a practicing physician while detained at home on account of the sickness of either his wife or child. Such damages are too remote. Nor is the anxiety and mental anguish suffered by him and his wife, or either of them, by reason of the child's sickness, proper elements of damages.

Power to Quarantine—Requiring Notice by Physician.—The Supreme Court of Iowa says, in the case of State vs. Kirby, that it is unquestionably true that the preservation of the public health is of paramount importance to the state at large, as well as to local communities, and that the state, in the exercise of its police powers, may confer on the state and local boards of health whatever powers are deemed necessary for the preservation of the general health of a community or of the state. It may, perhaps, be conceded that, even in the absence of express statutory authority so to do, the authorities of a local community would have inherent or implied power to adopt such rules and regulations as were reasonably necessary for the preservation of the public health of such community; but, whenever the state has expressly conferred such power, it must be exercised as provided in the grant. The policy of the law of this, as well as most of the other states, has been to confer great power on those boards; and it may be conceded, so far as the exercise of those powers is concerned, a liberal construction should be given to the rules and regulations adopted by such board. But they must not unreasonably interfere with the liberty, property and business of the citizen. And whether such regulations are reasonable, impartial and consistent with the state policy is a question for the court. While the law seeks the welfare of the greater number, and says that individual liberty and property must yield for the time being thereto, it has prescribed the preliminary steps necessary to deprive the citizen of these constitutional rights, and it is but just and in accord with settled legal principles that the courts require a strict adherence to the statute in matters of this kind. Chapter 59 of the Acts of the Twenty-fourth General Assembly provided that, "upon written notice given by any physician that smallpox . . . exists in any place, it shall be the duty of the mayor . . . to establish quarantine." Section 2568 of the Iowa Code says that "the quarantine authorized . . . in case of infectious or contagious diseases may be declared or terminated by the mayor . . . upon written notice given by any practicing physician of the existence of such disease" The local rules under which the local board of health acted in this case in undertaking to quarantine the party charged with disobeying its order were adopted in 1894, and the court thinks did require a written notice as provided by the statute; but whether this was so or not the statute required it when the rules were adopted, and, what was of more importance, it was required when the attempt was made to quarantine this party. No such written notice, however, had been given by any physician; and the court thinks the board was, for this reason, without authority to restrain the party. It is not necessary for the preservation of the public health, the court says, that the mayor be allowed to shut a person up in his own house, or in a pesthouse, on the mere suggestion of any one who may be unduly alarmed over appearances. Every town now has a competent physician for its health officer, and, in case of his temporary absence or inability to act, other competent physicians may easily be obtained for an examination and the written report required by the statute. The suggestion that this party had consented to this quarantine leads the court to further say this, that he might have waived a formal notice thereof might be conceded, but surely it would not be contended that he could be convicted of a violation of the quarantine statute simply because he had agreed to remain secluded from his fellows for a given length of time. Had he done this, he might be guilty of a breach of contract, but nothing more.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Philadelphia Medical Journal.

May 23

1 The Third and Final Report of a Case of Presystolic Mitral Murmur, Complicating Pregnancy, Etc., with Exhibition of Specimen, Showing Triple Valvular Lesion, viz., Mitral Stenosis, Tricuspid Stenosis and Aortic Stenosis. James Tyson.

2 *The Present Treatment of Puerperal Septic Infection. Edward P. Davis.
3 *Decreasing Fecundity: Its Causes and Results. Scott P. Child.
4 Malnutrition. Theodore J. Elterich.
5 *A Fatal Case of Anthracosis, with Autopsy. Thomas S. Githens.
6 The Local Use of Cocain in the Nose. W. G. B. Harland.

2. **Puerperal Septic Infection.**—Davis insists on the importance of prophylaxis, asepsis during obstetric cases, following every possible precaution. Among the methods of treatment which have proven of value he includes thorough cleansing of the uterus and vagina; cauterization of ulcers with carbolic acid and iodin; sponging out the vagina with cotton dipped in a 1 per cent. lysol solution or mercury bichlorid, 1 in 4000, and thorough exploration of the uterus with a blunt-edged curette to bring away necrosed material, but avoiding wounding of the tissue; the use of prolonged irrigations with lysol or creolin, 1 per cent., or normal salt solution at about 100 F. or more. If bleeding is exhausting it is well to pack the uterus moderately with gauze containing 10 per cent. of iodoform. No mercury bichlorid should be introduced within the uterus under any circumstances. The vagina should be lightly tamponed with dry bichlorid gauze left there for forty-eight hours, followed by thorough irrigation of the uterus and vagina with 1 per cent. lysol solution. No further douching should be practiced. Other measures mentioned as of decided value are applications of cold to the abdomen over the uterus with counter-irritation by turpentine stupes, prompt emptying of the intestines, the use of tonics and stimulating drugs, especially strychnia and ergot, liberal feeding, good nursing, the use of normal salt solution, either by the bowel or hypodermically, etc. He objects to hysterectomy in pelvic or abdominal abscess, and thinks it justifiable only where the infected placenta can not be removed. Such cases are of the rarest occurrence. If, on opening the abdomen, the fallopian tubes are found distended with pus, their removal is justifiable. The methods which must at present be considered as experimental are the use of streptococcic serum, the use of nucleids to produce increased leucocytosis, Credé's silver ointment applications, injection of formalin as recently recommended, hysterectomy and the ligating and dissecting out of the infected and thrombosed veins. He believes in hysterectomy during labor in infected cases, and mentions cases where recovery followed Porro's operation. Among the injurious methods he includes drugs to reduce temperature, too much anxiety to stimulate the heart by the use of digitalis, etc., the tendency to check purgation which Nature sets up, and repeated intrauterine manipulations. He advises the poor and those of little means to go to hospitals for confinement, where private rooms at prices available should be provided.

3. **Decreasing Fecundity.**—Child reviews the statistics, accepting apparently the prevalent opinions as to the actual decrease of fecundity of American women, and attributes it to the social customs, prevention of conception and gonorrhea and syphilis, especially the former, which he thinks is an important cause. He also mentions criminal abortion, which he seems to consider frequent.

5. **Anthracosis.**—Githens reports a case in which a diagnosis of tuberculosis was made, but the lungs showed pronounced anthracosis without the presence of any tuberculosis. Chemically, the pigment was about one-fifth of the lungs by weight, and 6.23 per cent. of the pigment was ash. This seemed to indicate that the anthracosis was due to hard coal and that the patient had worked as a miner before taking up his later occupation as barber. The points of interest were the youthfulness of the patient, the history of syphilitic infection five years previously and that the anthracosis was the direct cause of death. He remarks on the paucity of literature of the condition. With the exception of one article by Osler in 1875, he finds no mention of the disease in the United States, and he can learn of no cases from physicians in coal-mining districts.

Medical Record, New York.

May 23.

7 *Some Unusual Cases of Appendicitis. Robert F. Weir.
8 *On a Case of Complete Fibrous Obstruction (Congenital?) of Both Superior and Inferior Venæ Cavæ in a Young Man of Eighteen Years—First Recorded Case. Alfred Meyer.
9 *Total Respiratory Failure from Ether—Artificial Respiration for Over Four Hours; Recovery. H. H. Everett.

7. **Appendicitis.**—Several unusual cases of appendicitis are described by Weir, including one of internal intestinal strangulation from an elongated inflamed appendix with a clubbed termination attached to the side of the lower lumbar vertebræ; one of strangulated hernia with gangrenous appendix; one of tumor of the cecal wall following removal of the appendix; one of very short appendix, one-half inch long, which was productive of several sharp attacks. When it was found its lumen was nearly obliterated and its walls very much thickened and sclerosed. It was at first taken to be merely a remnant of the appendix, but close examination showed it to be complete. There was also a case of appendicitis with general peritonitis operated on, with also repeated venous infusions of normal salt solution and recovery. Weir follows the suggestion of Crile to limit the amount to 1000 or 1250 c.c. and add 10 to 15 minims of a 1-1000 solution of adrenalin chlorid, and also 5 per cent. of sterilized glucose or .03 per cent. sodium saccharate. The results have been excellent. Lastly, he reports a case of cancer of the appendix which was operated on, and the patient has remained well for over three years. He remarks that with the exception of this case and that of the short appendix, all occurred within the last year.

8. **Obstruction of the Venae Cavae.**—In the case reported by Meyer, both the superior and inferior venæ cavæ were obliterated and the entire return venous circulation was provided for by the dilated vena azygos major. He reviews the literature of such cases to a certain extent and holds that the cause of the obstruction here was obscure, with no evidence of specific disease.

9. **Ether Asphyxia.**—In the case reported by Everett the patient was being operated on for appendicitis in which gangrene and adhesions were found. Respiration finally ceased, and for four hours artificial respiration and adrenalin chlorid, strychnia, etc., were employed. The patient made a good recovery, which Everett attributes largely to the adrenalin.

Medical News, New York.

May 23.

10 *Fracture of the Spine: Three Cases. Howard J. Williams.
11 Rheumatic Tonsillitis in Children. John Stewart.
12 *Notes on Blood Pressure in Man. (Continued.) S. S. Goldwater.
13 The Circulation in Puerperal Eclampsia. Douglas H. Stewart.
14 Some Interesting Phenomena of Specific Immune Sera. Arthur P. Hitchens.

10. **Fracture of the Spine.**—Three cases of fracture of the spine, one including gunshot wound, are reported by Williams. He attributes the fatal result in one of his cases of fracture of the lumbar vertebræ to drainage after treatment, and holds that drainage in such a wound is not only useless, but attended with danger. In two of his cases he thinks that he might possibly have succeeded in myelorrhaphy according to the method of Stewart and Harte, but the wound would have had to be lower in the cord. He thinks that hereafter we will operate earlier in cases of spinal fracture and oftener in severer cases, knowing that even if the cord is completely crushed the destroyed zone may be removed and the ends approximated. Keen's rule, that after an accident, if the knee-jerk is absent and remains so, operation is contraindicated, should hold good no longer. Absence of deep reflexes should be the most urgent reason to perform exploration.

12. **Blood Pressure.**—Goldwater, in this portion of his article, discusses the influence of posture, which has the effect of producing a lessening of pressure to an average of 15 mm.; muscular exertion, which causes a rise, and baths, which have little effect on a healthy person, according to his experience, though cold baths decrease the heart's frequency and strengthen its force. A rising blood pressure thus produced should be contraindicated in cases of threatening hemorrhage. Other things which alter the blood pressure are massage and perspiration, the former increasing, the latter reducing. Local pressure alterations produced by aneurism are also noted by arteriosclerosis, which may be accompanied with extremely low as well as extremely high tension, according to the condition of the heart, whether weakened or not, and by nephritis where the

value of the tonometer is most apparent. Often the high tension may be the first indication of renal complications. The effects of the nitrites are also mentioned and observations reported in two cases. The fall seemed to be slight, the patients being dispensary patients and not entirely under control. Better results might be obtained in lowering the tension by these drugs in hospital practice. It can not be maintained that as yet any material result has been achieved by the study of the relations between blood pressure and valvular disease. The tension is high in proportion to the degree of compensation hypertrophy and low in uncompensated lesions. The depression of the blood pressure in mental disorders is remarked on, and also the pressure during fever. One distinct service that he mentions which the blood-pressure apparatus has done is to prove that arterial tension may be exceedingly low during the early stage of high fever, when the pulse is full and bounding; relaxation of the arterial walls is, no doubt, the cause. The suggestion is made whether having in the future better control of the circulatory apparatus during this period might not be of some value. In convalescence the clinician must not be surprised to see abnormalities.

Boston Medical and Surgical Journal.

May 21.

15 *A Study of 534 Operations upon the Gall Bladder and Bile Passages, with Tabulated Report of 517 Operated Cases. William J. Mayo
16 *The Germicidal Action of Alcohol. Charles Harrington and Harold Walker.
17 Report of Five Cases of Fracture of the Hip in Children. H. M. Chase, Jr
18 A Glass Urethral Irrigator. David D. Scannell.

15. **Gall-Bladder Operation.**—In 534 operations on 519 patients operated on by Mayo there were 19 deaths, or a mortality of 3.5 per cent.; 510 were for gall-stone disease, with a mortality of 3 per cent. In uncomplicated cases there was less than 1 per cent. mortality, but in complicated cases, including stone in the ducts, infections with and without stone, and malignant disease the mortality rose to 5 per cent. This is significant and indicates the importance of early operation. Mayo calls attention to the possibilities of even latent gallstone disease, and remarks that operation in uncomplicated cases is very simple. Cholecystostomy not only effectually cures the condition, but by permanently elevating the fundus brings the cystic duct to the bottom of the cavity and furnishes better drainage for the future. The "ideal" operation for closure of the gall-bladder incision has been successful in cases where slumbering gallstones were accidentally found during operation, but is not suited to cases that have symptoms and infection. He has not found that gallstones recur after treatment. Cholecystectomy, he thinks, will perhaps be the operation of the future, and it can be employed with almost equal safety with cholecystostomy.

16. **The Germicidal Action of Alcohol.**—The results of a series of experiments are reported by Harrington and Walker, who offer the following conclusions:

1. Against dry bacteria, absolute alcohol and ordinary commercial alcohol are wholly devoid of bactericidal power, even with twenty-four hours' direct contact, and other preparations of alcohol containing more than 70 per cent., by volume, are weak in this regard, according to their content of alcohol—the stronger in alcohol, the weaker in action.
2. Against the commoner, non-sporing, pathogenic bacteria in a moist condition, any strength of alcohol above 40 per cent., by volume, is effective within five minutes, and certain preparations within one minute.
3. Alcohol of less than 40 per cent. strength is too slow in action or too uncertain in results against pathogenic bacteria, whether moist or dry.
4. The most effective dilutions of alcohol against the strongly resistant (non-sporing) bacteria, such as the pus organisms, in the dry state, are those containing from 60 to 70 per cent., by volume, which strengths are equally efficient against the same organisms in a moist condition.
5. Unless the bacterial envelope contains a certain amount of moisture, it is impervious to strong alcohol; but dried bacteria, when brought into contact with dilute alcohol containing from 30 to 60 per cent. of water by volume, will absorb the necessary amount of water therefrom very quickly, and then the alcohol itself can reach the cell protoplasm and destroy it.
6. The stronger preparations of alcohol possess no advantage over 60 to 70 per cent. preparations, even when the bacteria are moist; therefore, and since they are inert against dry bacteria, they should not be employed at all as a means of securing an aseptic condition of the skin.
7. Provided the skin bacteria in the deeper parts can be brought into contact with *disinfectants*, alcohol of 60 to 70 per cent. strength may be depended on usually, but not always, to destroy them within five minutes.

American Medicine, Philadelphia.

May 23.

19 *Congenital Dislocation of the Hip: Report of a Bloodless Reposition, Followed by Death, with an Analysis of Twenty-three Cases in Process of Treatment. (Concluded.) H. Augustus Wilson, J. Torrance Rugh and W. M. L. Coplin.
20 *Acute Leukemia. John B. Nichols.
21 *Retrocecal Appendicitis with Retroperitoneal Pelvic Abscess. A. Ernest Gallant.
22 Fracture of the Ischiopubic Ramus and Rupture of the Bladder; Recovery After Operation. Lindsay Peters.
23 Anomalies of Respiration in High Altitudes. W. A. Briggs.
24 A Rapid Method for Hardening and Embedding Tissues. B. Meade Bolton and D. L. Harris.

19. **Congenital Dislocation of the Hip.**—The article by Wilson, Rugh and Coplin gives the report of the one fatal case of bloodless operation for restoration of congenital hip-joint dislocation. The child was evidently of low vitality and the recent changes in the lungs and kidneys which were found were probably due to the anesthetic. The details of the postmortem are given in full.

20. **Acute Leukemia.**—This article, which is a portion of a paper awarded honorable mention in a prize competition in the District of Columbia, covers the subject of acute leukemia, reporting a case at length in which a peculiar coccus was found in the blood, but which did not appear to be capable of producing leukemia in animal inoculations.

21. **Retrocecal Appendicitis.**—Gallant reports three cases, the only ones in which he has found the abscess located in the pelvis behind the peritoneum. It has usually an acute onset and the abscess is usually readily recognized in its later stage by vaginal or rectal examination.

New York Medical Journal.

May 23.

25 *In the Hemisphere of X-Ray Activity. J. Rudis-Jicinsky.
26 *The Ureteral Pelvis. Byron Robinson.
27 *Eclampsia—Its Prevention and Treatment. Edward A. Ayers.
28 *Atony of the Duodenum Diagnosticated and Corroborated by Operation. Mark I. Knapp.
29 *A Few Differential Diagnoses in Connection with the Exanthemata. William L. Somerset.

25. **The X-ray.**—One of the principal points made by Rudis-Jicinsky seems to be the greater effect of the *x*-rays in their sphere of greatest activity perpendicular to the anode. He illustrates it, showing the shading out of action, as the rays impinge less perpendicularly from the anode plate. He uses a protection of screen, shield, mask and lead box, with diaphragms for precluding the diffuse rays. This gives not only safe protection, but a very good opportunity to treat any lesion directly with the best radiation from the anode focus point, at the correct standard distance, through a speculum, or, if necessary, over the whole area with the lymphatic glands in surrounding infected tissues.

26. **The Ureteral Pelvis.**—Robinson's article is an elaborate anatomic description of the ureteral pelvis with its variations and relations to vessels, nerves, lymphatics, etc.

27. **Eclampsia.**—Ayers insists on the importance of prevention of eclampsia by proper diet and attention to the bowels. Keeping the bowels empty not only sustains the eliminative function, but permits the uterus to occupy the abdominal space with less interference with the work of the kidneys, ureter and heart. He also advises the patient to take a measure once a week of the entire urine passed in twenty-four hours, and having learned the normal amount, to inform the physician when any variation occurs. He holds that the increased abdominal pressure from the growing uterus has much to do with the development of eclampsia, and in all cases investigates this point. If the lower limbs or vulva are edematous or cyanosed he tries to keep the bowels empty and have the patient follow the rule of short periods of time on the feet and long periods of rest on the back and side. As regards the urine, he suggests the rule that whenever the amount excreted or the urea eliminated falls below the normal, or albuminuria or casts appear, treat the patient by diet, laxatives and diuretics to restore the functions to normal. If moderate effort does not succeed, exercise, diet, with active bowel and kidney stimulation, will sometimes cause death of the fetus, excite premature labor, or greatly weaken the mother. These strenuous results may not be called for. If there is headache, eye disturbances, furred tongue, cold, clammy skin and irritable pulse, we should not feel limited in the extent to

which we carry preventive measures. The indications for the induction of labor should be determined by a specialist. He suggests that it might be well to try the administration of thyroid extract when other methods fail. As regards the treatment of eclampsia, we must try to eliminate the toxins promptly and see whether we can do it without interfering with pregnancy. Many cases of eclampsia are the result of a very temporary condition of the emunctories. If, before the conditions have produced much cerebral hyperemia and asphyxiation of the blood, free catharsis can be secured, they may entirely cease and, by proper attention to warnings, a second attack be prevented. If the fetus has not been killed by the convulsions, the pregnancy may go to term. If it has killed the fetus, then labor can be induced in a gentle way after the toxic condition has been removed. Ayers condemns the plan of first attacking the convulsions and immediate emptying of the uterus. He thinks this gives the ideal results less chance to occur. We should not dull the nervous system with narcotics to lessen the response to elimination unless we add immediate delivery and perhaps blood letting. If the mind is clear and the effect of convulsions are marked he would give saline cathartics by the mouth and a high saline solution by the bowel. If the patient is highly nervous, with restlessness, tossing and mental activity, he favors the administration of 20 to 30 grains of chloral per rectum to relieve the nervous tension, not to produce narcosis. Nitroglycerin, 1/50 of a grain, should be given at the start and repeated as needed. If free catharsis is secured and the secretion of urine is not suppressed, and the convulsions lessen in an hour or two, he would not touch the uterus or further administer narcotics, but would use oxygen and hypodermoclysis with saline infusion. If following this treatment the attack ceases, eliminative treatment should be continued with lessening severity for one or two days, the diet being reduced to milk alone. The urine should be examined to see if the kidneys are acting normally. If not, labor should be induced by the bougie. The saline solution, he says, is one of the most valuable agents we have in obstetric work, particularly in hemorrhage, though in eclamptic cases its use requires more care. During convulsions the heart is laboring violently to empty its blood into the aorta and pulmonary artery, but is largely prevented by the respiratory spasm. By directly injecting into the vein at this time the strain is added to. He thinks as many cases in eclampsia die from exhaustion of the heart as from coma. For control of convulsions, when needed, he believes in the use of chloral by rectal injection, but its greatest danger is its effect on the heart. Veratrum viride is of value in cases showing a high tension. He would not be surprised to see it supplanted in the future by thyroid extract, which is a vasomotor depressant as well as a nervous stimulant, and this last action would seem perhaps to contraindicate it in eclampsia. However, he would not advise the use of any particular anticonvulsive as a routine measure, as no disease calls for more special selection than eclampsia. When labor is going to continue whether we check convulsions or not, it is best to hasten delivery. If the mental condition is active, the nervous system irritable, it is best to employ chloroform narcosis and dilate with judicious rapidity. He has had 46 cases of eclampsia with four deaths, and he thinks he has prevented a fatal termination in fully a score of cases. In all he has used nitroglycerin, chloral, chloroform and veratrum viride variously according to indications; dry and moist hot packs; saline infusion and injection; and various methods of cervical dilatation. In conclusion, he emphasizes two things: 1. That we can prevent the great majority of cases by careful application of the knowledge we possess; and 2, that in the treatment of cases each must be a law unto itself.

28. **Atony of the Duodenum.**—Knapp reports a case which he diagnosed as atony of the duodenum as against cancer, which was the other opinion given. There was a resistance at the left of the umbilicus running somewhat downward which he attributed to infiltration due to recurring attacks of pain in the abdomen, spasm and bowel distension. His reason for not diagnosing cancer was the intermittent character of the attacks, as in cancer, when the symptoms begin, they are continuous and not readily relieved by enemas, etc. The outcome of the case is given in the printed reports of the Presbyterian Hospital of New York for January, 1902. Operation revealed induration and thickening of the walls of the jejunum nearly obliterating its lumen, to which Knapp attributes the atony of the duodenum.

29. **Exanthemata.**—Somerset reports cases illustrating the difficulties of diagnosis and the differentiation of various exanthematous conditions. He remarks that the eruption of German measles is essentially macular, and only resembles that of scarlatina by confluence. Ordinarily the resemblance is rather to that of measles, but the crescentic arrangement is absent. It differs further from measles in giving a leucocytosis. With more profuse eruption, the resemblance is rather to scarlatina. Mild scarlatina and German measles may resemble each other very closely, but the strawberry tongue is never present in rötheln. The post-cervical glands are often enlarged, but by no means invariably so; conjunctivitis is exceptional; the temperature, pulse and clinical condition will not match the rash in scarlatinal proportion, and the eruption is apt to be patchy. German measles is more apt to be mistaken for scarlatina than scarlatina for German measles. He also reports a case of variola closely resembling varicella, and remarks that variola may abort and present itself in forms so divergent from the type that it deserves to be called varioloid or some other name, were it not that the contagion is as virulent in this case as in the most severe. The last case he reports is one of either quinin or ptomain poisoning resembling scarlatina.

St. Louis Medical Review.

May 23.

30 *The Healing of Granulating Surfaces by Application of Cobalt-aurate Animal Membrane. Warren B. Outten.

30. **Cobalt-Aurate Animal Membrane.**—Outten recommends for granulating surfaces the application of fine gold-beater's skin soaked in a solution of cobalt chlorid, 1 ounce; gold chlorid, 1 dram, and distilled water, 10 ounces. Over this is poured 2 ounces of pure oil of cassia, which is also a germicide. He finds that the skin thus prepared is an excellent application to granulating surfaces. Before applying it the membrane is put in alcohol and allowed to stay there from three-quarters to one hour, and then in water from 98 to 100 F., to remove the excess of oil and alcohol. A few punctures are made through it after it is dried, and it is then applied to the granulating surfaces, and covered with sterile gauze. Another piece of membrane is applied on top of the gauze and over this a layer of sterilized cotton. No dressing which he has used on granulating surfaces is, according to Outten, equal to this.

Cincinnati Lancet-Clinic.

May 23.

31 *Sciatica. G. L. Bailey.
32 Tuberculosis—Sanitation. H. H. Speers.
33 Surgery of Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

31. **Sciatica.**—The use of the hot-air bath with massage offers, according to Bailey, a simple and reasonably certain means of relief in all cases of sciatica not due to pressure or general disease, and the course of the malady can be materially shortened by the use of this treatment.

American Journal of Insanity, Baltimore.

April.

34 *A Contribution to the Study of the Blood in Manic-Depressive Insanity. Jessie Weston Fisher.
35 The Hallucinatory Delirium of Acute Alcoholism. Charles S. Walker.
36 *The Progress of Psychiatry in 1902—Great Britain. A. R. Urquhart.
37 *Puerperal Insanity. Robert Jones.
38 The Care of the Insane. Charles G. Wagner.
39 *Tent Life for the Insane. O. J. Wilsey.
40 A Graded and Systematized Plan of Outdoor Exercise for the Demented Insane. Chester L. Carlisle.
41 *The Final Chapter in the History of an Extensive Injury to the Head. H. P. Frost.

34. **The Blood in Mania and Melancholia.**—Fischer, who has investigated the blood in the so-called manic-depressive insanity of Kraepelin in the Connecticut Asylum, sums up her results in the following statements:

1. There are no pathognomonic blood changes in cases of maniacal phases of manic-depressive insanity. 2. Anemia is not a caus-

ative factor nor always an accompaniment of this psychosis. 3. The hemoglobin and red cells are frequently, if not always, increased during an attack of excitement. 4. A leucocytosis is an almost constant accompaniment and, I believe, a result of psychomotor activity. 5. That an increase in weight accompanies mental improvement.

36. **Psychiatry in Great Britain.**—Urquhart's contribution points out a number of advances in the practical side of psychiatry in Great Britain and notices also certain scientific studies, especially those of Mott in regard to the repair and decay of the nervous system and syphilis as a cause of insanity. There has also been good work done on phthisis and asylum dysentery, and nursing education has advanced. There has been better effort toward the organization of research and the same movement here manifest toward the treatment of incipient insanity in general hospitals has been in evidence in the British Isles. The legal treatment of insanity has been modified and the recognition of partial insanity demanding partial punishment is a notable fact. The works of Dr. Mercier, his psychology and his text-book on insanity are mentioned as the more important book contributions of the year.

37. **Puerperal Insanity.**—Jones recognizes a distinct form of insanity under this head, presenting marked delirium with wildness and hallucinatory delusions with religious and erotic features, which recognition, however, he admits is not in agreement with some high authorities. This is more particularly the insanity of parturition and the period immediately succeeding it. The insanities of lactation and pregnancy have no distinctive characteristics. In the type recognized, excitement is more common than depression, suicidal and infanticidal tendencies are frequent, heredity is marked in about 50 per cent., and while the disorder is usually considered among the curable types, it not seldom ends in terminal dementia. He considers the pathology of the condition, mentioning the possibilities of reflex processes of the crises of child-birth and also the absorption of toxins taken into the maternal circulation and irritating the nervous system. He favors asylum treatment for these cases, good nutrition, and the usual sanitary treatment of the puerperal condition.

39. **Tent-Life for the Insane.**—Wilsey reports an early experience in the Binghamton State Hospital in 1885, when patients were thus treated for certain periods with good results. The cause, however, was the crowding of the asylum rather than any therapeutic intent.

41. **Extensive Brain Injury.**—The case here reported by Frost was first reported by Rutherford in 1857. The man suffered a serious injury to the brain, destroying a large portion of the frontal and parietal bones, with apparent recovery. He was again reported in 1873, and was then in vigorous health, still again by Gray in 1876 and in 1888 by Bergtold under the title "Remote Effects in a Case of Extensive Injury of the Skull." At this time he was showing some physical and mental symptoms, unsteadiness of gait and some paresis of the facial muscles, atrophy in different parts of the trunk and limbs, and while free from delusions and hallucinations, was irritable and emotional. Thirteen years after this was written, in 1901, the patient was admitted to the Buffalo State Hospital for the Insane in a childish, irritable condition and somewhat demented, with paralysis, exaggerated reflexes, unequal pupils, etc. He died two years after entering the hospital, the cause of death being general debility due to his paralysis. The autopsy showed a large deficiency of bone on the right side extending from the external orbital process in front to the anterior margin of the occipital bone behind, and from the middle line above to within an inch of the external auditory meatus. The scalp and dura over this area were firmly adherent. The entire right hemisphere of the brain was markedly flattened and atrophied, the gyri presenting a shrunken or atrophied appearance with gaping sulci between. Microscopic examination showed a marked defect in the white matter with a much less advanced condition in the cortical gray. The theory is advanced that the direct pressure and loss of the protection of the cranial bones had the effect of interfering with the blood supply to the parts, and as the scar tissue contracted, the late symptoms of brain injury appeared. The article is fully illustrated.

American Gynecology, New York.

April.

12 *A Study of the Degenerations and Complications of Fibroid Tumors of the Uterus from the Standpoint of the Treatment of These Growths. Charles P. Noble.
13 Complete Nephro-ureterectomy. J. Wesley Bovée.
14 *Accidental Perforation of the Uterus. Abram Brothers.
15 *Gonorrheal Puerperal Fever. Fred J. Taussig.
16 Congenital Absence of the Uterus. W. A. Newman Dorland.

12. **Uterine Fibroids.**—Noble discusses the subject and points out the dangers of these growths, holding that one-third of the women having fibroids will die if not subjected to operation, while the mortality of myomectomy and hysterectomy is only 2 to 10 per cent. It is a fair conclusion that resort to early operation will affect a saving of 25 to 30 per cent. from the mortality in addition to a still greater saving in the morbidity.

14. **Accidental Perforation of the Uterus.**—Uterine perforation is a much more common accident, according to Brothers, than generally believed. The majority of cases never see the light of day because of the fear of criminal prosecution. It is rare, he thinks, for the condition to terminate fatally and the small mortality can be reduced to less than 1 per cent. if properly treated. He reports his own personal experience with it and reviews published cases. The proper course, he holds, is that when the uterus is perforated by the sound or curette to stop *any manipulation of the interior of the uterus*, especially uterine irrigations. If the curetting or sounding was preliminary to an intraperitoneal operation, this may be carried out, and the injury repaired with suture, but if no intraperitoneal operation was originally projected the patient can ordinarily be safely put to bed with an ice-bag over the hypogastrium and given morphin or opiates. If the uterus has been injured and the operator has irrigated the uterine interior, there may be a mild local peritonitis, requiring the same method of treatment as above, or a septic peritonitis may call for immediate hysterectomy with drainage through the vagina, or lastly, there may be a localized abscess in the pelvic connective tissue or pelvic peritoneum which may require to be attacked from above or below. Operation in most of these cases will be of the nature of an exploratory laparotomy, and the exact line of work be determined on when the abdominal cavity is opened. When the uterus has been injured and the intestine has been dragged through the wound and strangulated, laparotomy must be done as early as possible, resection of the intestine be performed if necessary, and the uterus repaired or removed as indicated. Even this condition is not necessarily fatal. Miquel has reported five recoveries in eight operations.

15. **Gonorrheal Puerperal Fever.**—The essential points regarding gonorrheal puerperal fever are stated by Taussig as follows: The gonococcus is the etiologic factor in about one-sixth of all cases of puerperal infection, and though almost invariably secondary to the gonorrheal process elsewhere, must be classified under the head of puerperal fever. The gonococcus may gain access to the uterine cavity without any internal examination being made, but more frequently it is brought about by digital examination and operative manipulations, particularly intrauterine, in delivery, etc. The infection shows itself at the sixth or eighth day postpartum by rigors, a temperature of 103 and severe abdominal pains. The fever is usually of short duration and the further course of the disease is mild, but liable to become chronic. Where the temperature begins to rise as early as the sixth day and continues to rise up to 103 or 104, it is still not necessarily caused by mixed infection, but may be due to the gonococcus alone. The diagnosis is based on the rather late onset, the slow, regular pulse, the moderate and steady elevation of temperature, the profuse purulent, glairy discharge, and, above all, the presence of gonococci in the lochia. Prophylaxis is of more benefit than treatment. All pregnant women having gonorrhea should be delivered without internal examination as far as possible. The treatment should be limited to one or two uterine douches, frequent vaginal irrigations and prolonged rest in bed.

American Journal of Obstetrics, New York.

May.

47 A Method of Determining the Internal Dimensions, Configuration and Inclination of the Female Pelvis. Hugo Ehrenfest.
48 *The Rational Treatment of Puerperal Infection. H. G. Wetherill.
49 Puerperal Hematoma; With Report of a Case and Remarks Concerning It. H. R. Coston.
50 Cystic Bladder Mistaken for an Ovarian Cyst. Enrique Fortun.
51 The Treatment of Gonorrhea of the Uterus. George W. Newton.
52 Septicemia with Uncommon Symptoms. John Van Rensselaer.
53 *Pruritus Vulvæ and Allied Conditions. Edward A. Balloch.
54 *The Reason Why Lactation Can Not Be Prolonged Under Existing Circumstances. Jennie G. Drennan.
55 The Uterine Incision in Cesarean Section. Churchill Carmalt.
56 The Surgical Treatment of Uterine Fibroma. Brooks H. Wells.

48. **Puerperal Infection.**—The treatment here advocated by Wetherill consists in rest in bed, no purges, no food by the mouth, lavage if nausea and vomiting occur, rectal feeding with stimulating and predigested foods in small amounts every four to six hours, and salt solution by the rectum, hypodermoclysis or intravenous injection as required. Once a day a cleansing rectal enema. Strychnia or other stimulants hypodermically. For local treatment he believes in the alcohol method of Carossa, using a special double-current drainage tube, which he illustrates, packing the vagina with gauze and having the nurse instructed to inject into the tube at short intervals from two to four ounces of 50 per cent. alcohol, thus flushing and cleansing the uterine cavity and retarding septic diffusion throughout the lymphatics. He leaves the tube and gauze *in situ* for from three days to two weeks, keeping them free from obstruction by a good piston syringe. The results of this treatment, he claims, are excellent. Regarding surgical measures in puerperal sepsis, he adds that his experience with the various methods teaches him to never operate during the acute stage except as a last resort, and then always with the worst possible prognosis.

53. **Pruritus Vulvae.**—Balloch describes the condition and reports a case which terminated in kraurosis, and was operated on by resection. He believes that the success of excision in kraurosis makes it advisable in simple pruritus after a reasonable trial of the ordinary remedies.

54. **Lactation.**—Drennan holds that normal lactation could be kept up for much longer periods than is customary at the present time if only men and women lived in a natural manner and avoided sexual excitement during the function.

Annals of Otology, Rhinology and Laryngology, St. Louis.

March.

57 *Peritonsillar Abscesses. Frederick C. Cobb.
58 Report of a Case of Large Cerebral Abscess Occurring During the Course of an Acute Suppuration of the Middle Ear; Operation; Recovery. J. F. Barnhill.
59 Pachydermia and Carcinoma, with Remarks on the Development and the Microscopic Diagnosis of Carcinoma. B. Fraenkel.
60 *Laryngeal Paralysis as a Primary Symptom of Tabes Dorsalis; With Report of Cases. Lorenzo B. Lockard.
61 *The Treatment of Recurrent Mastoiditis. Edward B. Dench.
62 *The Treatment of Abscess of the Septum, with Special Reference to the Prevention of Subsequent Deformities. C. G. Coakley.
63 *The Removal of the Stapes for the Relief of Auditory Vertigo. Eugene A. Crockett.
64 *A Brief Consideration of Prognosis in Chronic Suppurative Otitis, Based on the Results of a Year's Treatment of Such Cases. Thomas J. Harris.
65 Otosclerosis or Spongifying of the Capsule of the Labyrinth. George E. Shambaugh.
66 Angioma of Nasal Septum. Irving E. Kimball.
67 The Etiology, Pathology and Symptomatology of Acute Suppuration of the Middle Ear. Edward B. Dench.
68 Complications of Acute Middle-Ear Suppuration. James B. Clemens.
69 The Etiology, Pathology and Symptomatology of Chronic Purulent Otitis Media. M. D. Lederman.
70 Complications of Chronic Suppuration of the Middle Ear. Robert Lewis, Jr.
71 The Treatment of Chronic Suppuration of the Middle Ear. James F. McKernon.
72 The Preferable Route to the Accessory Cavities of the Nose in the Treatment of Chronic and Obstinate Suppurations. L. Picque and J. Toubert.
73 Treatment of Acute Suppuration of the Middle Ear. Wendell C. Phillips.

57. **Peritonsillar Abscess.**—The title of this paper, the author says, should perhaps have been "the location of pus in peritonsillar abscess," as that is the point to which he directs special attention. He finds three locations claimed as possible situations: 1. The pharyngomaxillary fossa; 2, the supratonsillar fossa; 3, the loose connective tissue underneath the mucous membrane surrounding tonsil or fossa. From his discussion of the anatomic conditions he concludes that the real site of the abscess is in the areolar tissue. The practical points of incision are given by him as follows: An upward and backward one, using a straight knife for anterior-superior cases; while for postero-superior an outward incision between posterior pillar and tonsil, with a right-angled knife, is advised.

60. **Laryngeal Paralysis in Tabes.**—Lockard concludes that laryngeal paralysis is present as a complication in about 15 per cent. of all cases of tabes and may precede all other symptoms from six months to three years. It is always limited to the posticus muscle and is usually, if not always, unilateral. It usually remains limited to this muscle for years or during life. This primary paralysis is fairly common, but owing to the lack of subjective symptoms the true percentage can not be ascertained. When the cause of abductor paralysis can not be correctly ascertained tabes should be thought of. It is frequently of great diagnostic importance, drawing attention to the general condition and sometimes reveals an unsuspected ataxia. Wherever the diagnosis of tabes is doubtful, a laryngeal examination should be made, whether or not there be subjective laryngeal symptoms. He reports cases.

61. **Recurrent Mastoiditis.**—Within the last few months Dench has operated on nine cases in which a previous mastoid operation had been performed and persistent sinusitis or recurrent inflammation occurred. In every case the exposure revealed dead bone in the tympanic vault and other anomalies in the walls. It is his practice in these cases to perform the ordinary Stacke-Schwartze operation, and he believes that we should not be content with relieving the immediate acute symptoms by doing a simple mastoid operation in acute mastoiditis. Wherever he finds that the patient has had an aural discharge previous to an acute attack he immediately does the radical operation.

62. **Septal Abscess.**—Coakley employs the Simpson tampon in cases of septal abscess to keep the two layers of the muco-perichondrium in close juxtaposition during healing and at the same time to help bear the weight of the superimposed soft parts until the newly-formed connective tissue is of sufficient density to support them unaided. At the end of a week some form of hollow nasal splint may be substituted for the Simpson tampons to prevent the continuation of mouth breathing.

63. **Auditory Vertigo.**—Crockett advises in the severe form of auditory vertigo, after ordinary treatment has proved futile, the removal of the stapes, and reports cases. His technic is as follows: A flap is made of practically the whole posterior quadrant of the membrane, putting the knife in behind the umbo and carrying it upward close to the posterior edge of the malleus, then across posteriorly and down the posterior superior wall. This flap is then turned downward. The incudostapedial articulation is then cut, if possible, from behind forward. The long process of the incus is then seized with a Sexton forceps and the ossicle removed by traction. The stapedius tendon is then cut and a blunt-pointed hook passed between the crura and the stapes and the stapes removed by traction a little upward and outward. The operation is very painful and generally an anesthetic is advisable. In both cases which he reports total deafness resulted. There was also an increase of tinnitus, which he attributes to hemorrhage in the internal ear, but the ultimate results were good. He advises also *always to explain the fact that total deafness* may be the result of the operation, though the tinnitus may be ultimately relieved.

64. **Prognosis in Chronic Suppurative Otitis.**—From his study of the subject, Harris offers the following deductions:

1. Chronic otorrhea in a large percentage of cases is amenable to suitable medical treatment. 2. In addition to proper attention of a general character and to the naso-pharynx, peroxid of hydrogen, with or without formalin solution, gives the best results, all minor operative procedures of course first being attended to when necessary. 3. The results of such treatment are in a good number of cases permanent. 4. The risk of an uncured otorrhea with good drainage is relatively very small (1/2 or 2/3 of fatalities). 5. Medical treatment failing, after a suitable interval of time, the danger of fatal complications in absence of all symptoms should be laid before the patient and the promise of relief by operation

stated. 6. Where there is no good reason to the contrary, such as intracranial or mastoid complications, the intratympanic method by ossiculectomy should be preferred, (*a*) because its results as regards the cure are equally good; (*b*) the risk of loss of hearing is vastly less; (*c*) the danger of unpleasant sequelæ, such as facial palsy, is avoided, and (*d*) the possibility of prolonged after-treatment is obviated. 7. The radical operation is not without risk of life. 8. Where ossiculectomy fails or mastoid or other symptoms exist pointing to extension of the disease into the bone, the radical operation then becomes the suitable and valuable method of relief. 9. The protecting and assisting power of nature is never to be lost sight of.

Archives of Ophthalmology, New Rochelle, N. Y.

May.

74 *The Proper Division and Fixation of the Skin Flaps in the Operation for Cicatricial Ectropium to Prevent Re-eversion. F. C. Hotz.
75 Chronic Empyema of the Ethmoidal and Frontal Sinuses, with Exophthalmos; Operation; Death from Meningitis; Autopsy. Arnold Knapp.
76 Y-Shaped Rupture of the Choroid in the Macula Region with Retention of Good Vision. J. J. Mills.
77 A Contribution to the Pathology of Anomalies of the Vessels and the Formation of Stripes in the Retina. Rudolf Schilling.
78 The Antiseptic Tattooing of the Cornea. L. DeWecker.
79 On the Histology of Bullous Keratitis in Glaucomatous Eyes. G. E. de Schweinitz and E. A. Shumway.
80 A Test for Central Color-Perception. Percy Fridenberg.

71. **Cicatricial Ectropium.**—Hotz reports a method of preventing the after-contraction of the lids in the operation for cicatricial ectropium. He avoids traction of the shortened flap on the lid border by dividing the wound area into two sections, one representing the surface of the lid and the other section the wound surface beyond the lid, covering each section with a separate skin flap, anchoring the flap and covering the lid surface so securely that the contraction of the other flap can have no effect on it. In the case of cicatricial ectropium of the upper lid he anchors the lid flap to the tarsus, and in the lower lid to the tarso-orbital fascia. The technic is described in detail.

International Medical Magazine, New York.

May.

81 *Membranous Croup and Diphtheria. J. A. Ellegood.
82 *A Provisional Pathology of Graves' Disease. Edward Blake.
83 *The Physiologic Basis of Manual Therapy and the Rôle of the Vasomotor Mechanism. John P. Arnold.
84 Adrenalin Chlorid in Pulmonary Hemorrhage and Epistaxis. Edward A. Robinson.

81. **Membranous Croup and Diphtheria.**—From a careful consideration of the subject Ellegood concludes that there is no such disease as true membranous croup; that pseudo-membranous inflammation of the mucous membrane of croupous or diphtheritic type, whether or not followed by paralysis, is always caused by the Klebs-Loeffler bacillus in some phase of its existence. This bacillus is a facultative saprophyte. The virulent and the non-virulent types are of the same genus of micro-organisms, and the non-virulent type is the same organism undergoing a kind of saprophytic state of existence which is interpolated in the life history of the parasitic bacillus. The degree of toxicity manifested depends on certain unknown vital conditions of the micro-organism, and on the anatomic character of the part attacked, the degree of immunity possessed and the effect on the germs and its toxins of associated bacilli. Isolated cases of diphtheria, or those which do not give rise to infection, are as frequent as the cases of membranous inflammation of the larynx in which the membrane is confined to that organ without giving rise to infection or to the constitutional symptoms of diphtheria. The failure to find the specific bacillus in a small proportion of cases is due to faulty technic, the late stage in the disease at which the bacteriologic examination was made, unknown morphologic conditions of the micro-organisms, to the development of peculiar or unusual relations to staining reagents, to autolysis, or to the action of other bacteria. Antitoxin when administered early in uncomplicated cases is an almost unfailing remedy, and is useful in all cases. He holds that the occurrence of the bacillus in healthy persons should be carefully investigated, as they are as dangerous as diseased ones.

82. **Exophthalmic Goiter.**—The pathology of Graves' disease offered by Blake is that it is a sort of petrified terror. He thinks there are a number of agencies that can produce this condition, such as staphylotoxin, streptotoxin, intestinal poisons, malarial plasmodium, septic products and probably vitiated respired air, and possibly other causes. He considers the success of iodids and fluorids in this disease as due to their antitoxic and germicidal products. The real aim of treatment should be to attack its cause. He has witnessed cases of the disease which recovered rapidly after removal of colonies of staphylococci and streptococci from the buccal and pelvic cavities.

83. **Manual Therapy.**—The basis of manual therapy, according to Arnold, can be looked for in the vasomotor mechanism. This should be thoroughly understood by the physician.

Therapeutic Gazette, Detroit, Mich.

May 15.

85 *A Preliminary Note on Some Experiments to Determine Whether Alcohol Does Good in Infections by Increasing the Bacteriolytic Power of the Blood. H. A. Hare.
86 Treatment of Conjunctivitis, Corneal Opacities and Syphilitic Iritis. Edward Jackson.
87 *The Preparation of Patients for Anesthesia. John G. Clark.
88 *The Choice of an Anesthetic. Gwilym G. Davis.
89 *The Methods of Administration of Anesthetics. Edward Martin.
90 *Potassium Iodid in Migraine. J. R. Clemens.
91 On the Therapeutic Value of the Nuclein Compounds. James Burnet.

85. **Alcohol.**—This experimental investigation by Hare leads to the conclusion that alcohol seems to have the power of increasing the bacteria-destroying action of the blood in infectious diseases, and while the experiments thus made are too few to determine the question and are also somewhat contradictory, they indicate, so far as they go, that this effect is produced, to some extent at least, by an increase in complement.

87. **Anesthesia.**—The preparation of the patient for the anesthetic is the subject of Clark's paper, which points out the pulmonary conditions contraindicating anesthesia, among the first of which he includes bad colds. The patient suffering from coryza runs the risk of pneumonia, and this is a serious contraindication to anesthesia. A cold is almost invariably made worse by an anesthetic. In chronic bronchitis, however, the anesthetic may even improve matters. The stimulation of the ethereal irritating vapor apparently assists in overcoming the chronic bronchial inflammation. Pulmonary tuberculosis, if localized with sufficient lung space still for respiration, is *not*, as a rule, rendered worse. Chronic emphysema is always a serious contraindication. In heart troubles the danger is not from profound anesthesia, but rather from the early stages of its administration. The stage of excitement should be avoided as much as possible by giving ether or chloroform very slowly, so that the passage between consciousness and deep anesthesia is very gradual. As a rule, therefore, cardiac lesions are *not contraindications*, unless there is a serious failure in compensation. Next in importance he insists on careful examination of the urine. Renal insufficiency with a small trace of albumin is much more significant of danger than a considerable amount of albumin with an approximately normal quantity of urine. He has found that ether rarely produces serious kidney lesions if the anesthesia has been in skilled hands. The chief indication, admitting the contraindications mentioned, is to directly evacuate the alimentary tract and to cleanse the blood of the by-products that are to be excreted by the kidneys, so that in the one or two days following the operation the patient's excretory apparatus may undertake unhindered the elimination of the nitrogenous and waste products arising from the ether intoxication and from the increased metabolism incident to any operation or infection. He advises the use of an increased amount of fluids up to two hours before the operation, so as to increase the watery constituents of the blood and dilute the irritant products, and gives calomel in .5 gr. doses every half hour until two grains are taken, followed by an enema three hours before the operation. Bromids, morphin, etc., to prevent nausea have not been satisfactory. The other minor details, such as the removal of false teeth, the abstinence from food for six hours, are well known.

88. **The Choice of an Anesthetic.**—Davis holds that ether is generally to be used unless it is contraindicated, but he has seen fatal results, and emphasizes that it also requires the exercise of care and precaution in its use. He would prefer Willy Meyer's anesthol to chloroform, but ether is less depressing and, therefore, is to be used in preference to either

wherever shock is liable to be a prominent factor. In very old persons the tendency to bronchitis makes chloroform the more desirable, and also in lung troubles and in alcoholics. In certain operations on the brain, mouth or throat, chloroform or anesthol is to be preferred. In genitourinary work he would prefer ether. The preceding administration of nitrous oxid has much to recommend it as rendering anesthesia easier and more satisfactory. Nitrous oxid gas is familiar to every one. Bromid of ethyl is hardly a safe anesthetic, and he does not recommend it. Kelene or ethyl chlorid is considered by Ware of New York as about midway in safety between nitrous oxid and ether. In conclusion he calls attention to the primary anesthesia which can be obtained with ether, and which will be found in many cases for short operations perfectly satisfactory, and yet not have the uncomfortable after-effects of full anesthesia.

89. **Anesthesia.**—Martin would use nitrous oxid for brief operations, ethyl chlorid for fast work to some extent, though its safety is still a matter of question. Ether is the best and safest anesthetic for major surgical procedures. Chloroform can be used in brain surgery and in patients suffering from inflammatory lesions of the air passages. It has been clearly shown that its irritating effect on the kidneys has been greater than that of ether.

90. **Potassium Iodid in Migraine.**—Clemens has been lately prescribing potassium iodid to the exclusion of all other drugs in migraine headache, and the results have been so remarkable that he offers his experience to the profession. The reasons which induced him to give it were the similarity between migraine and cerebral syphilis and the raised arterial tension. He gives 5 to 10 grains of potassium iodid three times daily and finds that after two or three weeks the headache is completely eradicated. He has not met a case that was not absolutely cured. He notes as a significant point in treatment that the headache can be recalled by simply discontinuing the drug for a few days.

Medical Examiner and Practitioner, New York.

May.

92 The Diagnosis and Treatment of Uterine Displacements. William M. Polk.
93 Concerning Wandering Spleen. Heinrich Stern.
94 Various Types of Open or Compound Fractures of the Members. Thomas H. Manley.
95 A Résumé of the Most Potent Factors of Disease and Death in the World's History, with a Review of Modern Prophylaxis. W. H. Irvine.
96 Fallacies of Sugar and Albumin Tests. M. E. Chartier.

Medical Sentinel, Portland, Ore.

May.

97 Report of a Case of Interutero-Placentary Hemorrhage. H. A. Castle.
98 Needle Holders and Needles—A Needle Holder with Normal Curve Jaws; Curved Needles with Round Shaft. R. C. Coffey.
99 Report of a Case of Tubal Pregnancy Treated Through Vagina. T. F. Smith.
100 Foreign Bodies in the Appendix. Ernest Hall.

California State Journal of Medicine, San Francisco.

April-May.

101 Correction of an Imperfect Operation. George B. Somers.
102 Tropical Diseases in California. Wm. W. Kerr.
103 How Far Shall the State Restrict Individual Action of the Sick, Especially the Tuberculous? Norman Bridge.
104 Intra-abdominal Shortening of the Round Ligaments for Retrodisplaced Uteri. J. Henry Barbat.
105 Puerperal Eclampsia. H. M. Pond.

Southern California Practitioner, Los Angeles.

May.

106 The Bible of the Anesthetist. F. D. Bullard.
107 The Importance of Early Diagnosis and Treatment in Diseases and Injuries of the Eye. W. Edward Hibbard.
108 The American Italy. Charles E. Nammack.

New Yorker Medicinische Monatschrift.

March.

109 Ueber Gewebswiderstande bei Carcinomen mit starker Zellproliferation. F. Maass.—Tissue Resistance in Carcinoma, with Excessive Cell-Proliferation.
110 Ueber die Einrichtung von medicinischen Privatbibliotheken. W. Mueller.—On the Arrangement of Private Medical Libraries.

Albany Medical Annals.

May.

111 Recent Studies Regarding the Morphology of the Diphtheria Bacillus. Arthur T. Laird.
112 Chronic Hydrocephalus, with Report of a Case Associated with Gigantism. George G. Lempe.
113 Hip-Joint Deformities. Charles E. Davis.
114 Report of a Case of Enlarged Prostate. Douglas C. Moriarta.

Kingston Medical Quarterly.

April.

115 Sawdust and Fish Life. A. P. Knight.

Nashville Journal of Medicine and Surgery.

April.

116 Abortion. G. W. Moody.
117 A Simple Operation for the Cure of Hydrocele. Jas. K. Blackburn.

Medical Summary, Philadelphia.

May.

118 A Young Surgical Case. Frank R. Brunner.
119 Remarks About Tonics. W. R. D. Blackwood.
120 Membranous Croup. M. G. Price.
121 Typhoid Fever. A. J. Shore.
122 The Treatment of Nervous Insomnia. S. Warren Reichard.
123 One Way of Treating Peritonitis. Wm. H. Vail.
124 Physician and Patient. C. E. Boynton.
125 Physiologic Metaphors. J. L. Wolfe.
126 Selection of Food According to the Purposes to Be Accomplished. J. J. Caldwell.
127 Appendicitis. L. A. Kelly.

Vermont Medical Monthly, Burlington.

April 25.

128 Artificial Infant Feeding. Godfrey R. Pisek.
129 The Relative Importance of Heredity, Susceptibility and Contagion in the Development of Tuberculosis. Charles S. Caverly.
130 The Logic of the Open Air Treatment of Tuberculosis. C. W. Peck.

Proceedings of the Philadelphia County Medical Society, Philadelphia.

April 30.

131 *The Surgical Treatment of Pruritus Vulvæ, with the Report of a Case Cured by Resection of the Genitocrural Ilioinguinal, Inferior Pudendal and Superficial Perineal Nerves. Barton C. Hirst.
132 Sudden Death. William S. Wadsworth.
133 Some Biological Differences between the Natural and the Artificial Feeding of Infants. David L. Edsall.
134 Milk as a Carrier of Infection. Samuel M. Hamill.

131. This article appeared elsewhere. See THE JOURNAL of May 30, ¶18, p. 1535.

Alabama Medical Journal, Birmingham.

May.

135 Annual Message of the President of the Medical Association of the State of Alabama. Glenn Andrews.
136 Monitor's Address. C. H. Franklin.
137 Report of the Senior Vice-President. M. B. Cameron.
138 The Operative Relief for Albuminuria. George S. Brown.

Medical Herald, St. Joseph, Mo.

May.

139 Eye Troubles in General Practice. George Park.
140 Hydrocephalus, or Tumor of the Brain. W. R. Brock.
141 The Need of National Leprosaria. A. L. Belt.
142 The Psychological Factor in Medicine and its Application to Nervous Diseases. John Punton.
143 Report of Cases: 1, Sarcoma of the Pelvic Fascia; 2, Malignant Tumors of the Fundus of the Uterus Associated with Myoma; 3, Three Cases of Ileus. O. Beverly Campbell.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

May 16.

1 *On the Physiologic Action of the Kenyah Dart Poison and Its Active Principle Antiarin. C. G. Seligmann.
2 *Drug Eruptions. George Pernet.
3 Datura Poisoning in the Federated Malay States. John D. Gimlette.
4 *Experimental Hemoglobinuria in a Case of Black Water Fever. Patrick Manson. Reported by W. G. Ross and Geo. C. Low.
5 Hodgkin's Disease and Arsenical Poisoning. Walter Broadbent.
6 Case of Severe Belladonna Poisoning. George R. Livingstone.
7 Case of Chlorodyne Poisoning, with Recovery. K. R. Dalal.
8 Case of Acute Alcoholic Poisoning in a Child Aged 4 Years; Treatment by Saline Injection; Recovery. Frederick C. Forster.
9 Cases of Angioma of Synovial Membranes and of Muscle. Frederick Eve.

1. **Antiarin.**—Seligman has investigated the action and active principle of the Kenyah dart poisoning of Borneo and its active principle, antiarin, and finds that it acts on the ventricle of the heart as a poison of the digitalis group. This has been noted by all previous observers. It also causes paralysis of the central nervous system and temporary chronic spasm of the

voluntary muscles. In mammals or birds the gastro-intestinal symptoms are usually added to the above effects, though certain birds, however, are comparatively immune. His preparation of antiarin, a crystalline glucoside, lacked the convulsive effect of the crude substance, Kiliani's antiarin investigated by Hedbom, though as a cardiac toxin it was fully as active.

2. **Drug Eruptions.**—The drug eruptions noted by Pernet are erythematous, urticarial, papular and desquamating rashes produced by belladonna, arsenic, iodoform, copaiba, quinin and salicin, digitalis, etc. Borax has been said to cause psoriasis. He questions this statement, but admits that it is possible. Chloral hydrate deserves special notice. The eruptions produced are usually erythematous in type. He also mentions the erythema following chloroform and ether and the antitoxin rashes. The diagnosis is noted at length. Erythema multiforme, he remarks, has been closely imitated by drug rashes. In the arsenic beer poisoning epidemic in England recently, many of the cases closely resembled this type. When psoriasis, lichen planus or syphilides are simulated the duration of the corroborative symptoms should be taken into account. Headache, for example, would suggest antipyrin. If copaiba is suspected, a gonorrheal discharge will be of assistance. In localized dermatitis he suggests our looking out for the pediculus pubis and the application of mercurial ointment. The vesicular and bullous lesions are at times mixed up with erythematous and papular ones, indicating severer action of the drug. Salipyrin has produced something in this line. The author remarks that bullous eruptions are greatly aggravated by potassium iodid given internally. Arsenic may give rise to zoster. The iodid of potassium eruptions are more commonly pustular, but vesicles and bullæ are sometimes seen. Of the pustular eruptions those of bromid and iodid origin are the more notable, but arsenic, salicylic acid, etc., have occasionally produced them. The distinctive characteristics of the bromid and iodid rashes are noted. Furuncular complications sometimes occur from the use of these drugs, and gangrene has been produced by arsenic, quinin and also after orthoform locally applied. (The author does not mention the carbolic acid gangrene in this connection.) Pigmentation is a matter of interest and importance and has lately been prominently brought before the medical profession by the Manchester arsenical epidemic. The argyria produced by the nitrate of silver formerly used for epilepsy is a notable instance of this type. Keratosis or hyperkeratosis is seen in arsenical poisoning. Tumor-like lesions may occur in bromic or iodid eruptions. The condition of the nails and hair should be noted in connection with arsenical and quinin intoxication. He suggests as regards etiology that the gastrointestinal condition may be of importance. The nervous system can not be neglected, though its influence has been overrated. There is a great difference in individuals, though raising the question of idiosyncrasy, he says, "burkes the question of causation." *In the treatment the first thing to do is to stop the offending remedy.* A certain amount of diarrhea in these cases should not be interfered with. It is important not to push drugs which, instead of ameliorating morbid skin conditions, do exactly the contrary. In bromid eruptions arsenic is of assistance. The prognosis is favorable as a rule, though hopeless in the nitrate of silver cases. These, however, are rare nowadays.

4. **Experimental Hemoglobinuria.**—Manson reports the case of a young man who believed that the administration of quinin produced blackwater fever, and was perfectly willing to have the effect demonstrated. The observation was made and a mild case of blackwater fever produced. The case is one more proof that in some individuals, under certain unknown conditions, quinin produces hemoglobinuria.

The Lancet, London.

May 16.

10 Combined Congenital Defects and Organic Disease of the Heart. Thomas Oliver.
11 *The Uses of Paraffin in Plastic Surgery. Stephen Paget.
12 Abdominal Hysterectomy for Myoma by Doyen's Procedures. Walter G. Spencer.
13 A Case of Acute Bullous Eruption Affecting a Butcher. Arthur S. Morley and G. H. Ransome.
14 *A Case of Bullet Wound of the Brain, with Partial Motor Paresis and Hemianopsia. N. Bishop Harman and A. A. Bradburne.
15 Case of a Man Blind from Congenital Cataract Who Acquired Sight After an Operation When He Was 30 Years of Age. A. Maitland Ramsay.
16 Some Observations on the Blood Gases in Diabetes. A. P. Beddard, M. S. Pembrey and E. I. Spriggs.
17 Surgical Emergencies in General Practice. George A. Clarkson.
18 Cessation of Respiration During Anesthesia; Recovery After One and a Quarter Hours. David Lamb.
19 *Note upon the Use of Pilocarpin in the Treatment of Pneumonia. E. Curtin.

11. **Paraffin Prothesis.**—Paget first reviews the history of this method, giving full credit to Gersuny as its originator, and describes the technic, preferring the heating point for paraffin between 108 and 115 degrees F. in ordinary cases, but where it has to stand heavy and immediate pressure the higher heating point is desirable. All paraffin shrinks, but this is slight and may be practically ignored. He has done 43 cases of nose remodeling without accident, with no death, no embolism, no sloughing of the skin and no wandering of paraffin into the eyelids. The results were permanent in some cases, improvement in some is only partial, others fairly good, and in still others but slight. Some cases that seem hopeless do very well, and others that look easy are found difficult. While the chief causes of shrunken noses are injury, inherited and acquired syphilis, there is a set of cases where it is due to abscess in the nose in childhood and others where there is no history at all. The skin in these cases *must* be loose and not cicatricial. That is the most important thing in results. If it is fairly loose, soft and healthy, and it can be picked up between the finger and thumb, one can be sure of doing good, but there is danger of failure and disappointment if it is tight and hidebound or cicatrized and fastened by adhesions. He mentions in conclusion the use of paraffin for the holding up of the prolapsed bowel or uterus. He would not advise it in uterine cases if the pessary will make the patient comfortable, for there is a slight risk of embolism. The general procedure is much the same in both, only that in the uterus the prolapse may need a large quantity of paraffin and care should be taken to avoid the bladder or rectum. The bulk of the paraffin should be put under the mucous membrane of the posterior vaginal wall and at the sides of the vagina. In the cases he operated on for this purpose his success astonished him. It should not be used, however, in cases during the child-bearing period, as it prevents this function.

14. **Brain Injury.**—Harman and Bradburne report the case of a man shot through the head in the Boer war, giving diagrams showing the exact course of the bullet, which passed from the anterior portion of the parietal down to near the external occipital protuberance, the wound being clean both in entrance and exit. The patient had a transient motor paresis and hemianopsia. The former was nearly recovered from while the latter seemed to be permanent. One point of importance is specially mentioned, the rim of blindness found along the left side of the left field, indicating the existence of a defect in the area held to be supplied by nerve fibers connected with the right uninjured hemisphere. This can be accounted for either according to the Charcot hypothesis of a double decussation of the optic nerve and its connections, one at the chiasma and another in the hemisphere, or the supposition of an injury also to the right hemisphere. The latter is the theory that is favored. The general conclusion from the case is that the central area of the visual field has its cortical connection toward the apex of the cuneus, and supports the view that the perceptive center for vision is situated in the occipital and cuneate regions rather than in the more anterior angular gyrus. The case gives no information as regards the psychic visual center.

19. **Pilocarpin in Pneumonia.**—Several cases are reported in which pilocarpin injected in doses of 1/10 of a grain hypodermically caused almost immediate arrest of the unpleasant symptoms of pneumonia, also diminished pleuritic pain, etc. From his limited experience Curtin concludes that pilocarpin will have a leading place in the treatment of pneumonia, relieving the pain and breathing and sometimes also hastening resolution by exciting glandular secretion. Its administration in most cases is followed by an immediate rise of temperature of ½ to 1½ degrees. One-tenth of a grain dose hypoderm-

ically does not cause profuse perspiration, and but rarely fails to reduce the temperature within an hour or two. It also cleans the tongue and stimulates the flow of saliva. He has not noticed its repeated administration attended by any undesirable results. As a precaution he emphasizes the importance of keeping the patient warm, especially the feet.

Australasian Medical Gazette, Sydney.

April 20.

20 The Physiology of Voluntary Movements. George E. Rennie.
21 The Causes and Prevention of Death from Chloroform. W. B. Vance.
22 Ether Anesthesia in Children. R. B. Wade.
23 Post-Operative Suppression of Urine. William S. Byrne.
24 A Simplified Method of Accurately Estimating Degrees of Leucocytosis. F. Guy Griffiths.
25 A Case of Crossed Hemiplegia and Convulsions in an Infant Six Weeks Old. H. G. Holmes.

Journal of Tropical Medicine, London.

May 1.

26 Tropical Hygiene. W. J. Simpson.
27 *Experimental Hemoglobinuria in a Case of Blackwater Fever. W. G. Ross and George C. Low.
28 Filaria Loa. A. T. Ozzard.
29 Notes on a Case of Ulcerating Granuloma of the Pudenda. W. Renner.
30 Treatment of Beri-beri with Arsenic at the District Hospital, Kuala Lumpur, Selangor. A. J. McClosky.

27. See Paragraph 4 above. The authors here suggest that the antecedents of the case seem to indicate that the hemoglobinuric idiosyncrasy may have been due to neglect of the use of quinin in the earlier stages of what may be a special form of malarial infection, and consequent development of an intense and peculiar cachexia.

Annales Pasteur, Paris.

Last indexed page 408.

31 (XVII, 1.) Nouvelles recherches sur l'arsenic de l'organisme. G. Bertrand.
32 New Lactose Yeasts. P. Mazé.—Qelques nouvelles races de levures de lactose.
33 Influence de la configuration stéréochimique des glucosides sur l'activité des diastases hydrolitiques. H. Pottevin.
34 Etudes sur l'hemolyse. H. Landau.
35 Antimalaria Campaign in Algiers. E. Sergent.
36 Méthode d'hydrolyse des protoplasmides. A. Etard.
37 (No. 2.) Epithélioses infectieuses et epithéliomes. A. Borrel.
38 Encouraging Report of Serum Treatment of Sheep Pox. Ibid.—Etude exp. de la clavelée. Filtration du virus; seroclavelization; serothérapie.
39 *De la fixation de la toxine tétanique par le cérébrum. Besredka.
40 Recherches sur les "propriétés antitétaniques" des centres nerveux. de l'animal immunisé. K. Dmitrievsky.
41 (No. 3.) Sur le mode d'action des antitoxines sur les toxines. J. Bordet.
42 Sur les hemolysines cellulaires. C. Levaditi.
43 Sur la flore microbienne thermophile du canal intestinale de l'homme. Tsiklinsky.
44 Study of South American Horse Disease. Elmassian.—Sur le mal de caderas.
45 Le Bacillus subtilis comme cause de la panophthalmie chez l'homme. W. Silberschmidt (Zurich).
46 Sur un nouveau streptothrix—St. polychromagène. H. Vallée (Alfort).
47 Rabies Virus in Local Lesion in Child. D. Pace (Naples).—Sur l'existence du virus rabique dans le siège de la morsure d'un enfant mort de la rage.
48 Le rabies dans l'Afrique du Sud. A. Loir.
49 Colorabilité des bacilles de Koch dans les sputa incorporés à diverses substances. J. Sabrazès (Bordeaux).

39. **Fixation of Tetanus Toxin by Brain Substance.**—Even after the brain substance was thoroughly saturated with the tetanus toxin in Besredka's experiments, it completely recuperated and regained its primary integrity on addition of antitoxin. The tetanus toxin, therefore, does not form a stable combination with the brain substance, as it can be thus readily dislodged.

L'Obstetrique, Paris.

Last indexed xxxix, page 1011.

50 (VII, 6.) *Fate of Prematurely Born Infants. C. Maygrier.—Deux statistiques hospitalières de prématurés (Lariboisière 1895-98, and Charité 1898-1901.)
51 *Lactation During Pathologic Conditions. P. Budin and M. Perret.—De l'allaitement pendant les suites de couches pathologiques.
52 Des paralysies faciales spontanés du nouveau-né. O. Macé.
53 (VIII, 1.) La mortalité infantile de zéro à 1 an. P. Budin.
54 Infection puerpérale et hystérectomies. O. Macé. Critical review.
55 (No. 2.) Des assurances sur décès des enfants. P. Budin. See abstract, p. 1110.
56 Rapport sur l'unification de la nomenclature obstétricale. P. Bar.
57 Measurements of Fetal Head. Vallois.—Note sur les diamètres de la tête fetale à terme.

50. **Fate of Prematurely-Born Infants.**—Maygrier has found that 45 out of 48 infants born soon after the sixth month and weighing less than 2.500 gm., followed to date are alive and well. The mortality was 19.4 per cent. out of 597 such births at Lariboisière Hospital and 10.12 per cent. in 316 at the Charité.

51. **Lactation During Disease.**—Budin describes 19 cases of grippe, uterine, puerperal or other infection occurring in women nursing new-born infants. The breasts were washed with a weak solution of sublimate and then with boiled water before the child was nursed, and he was kept entirely away from the mother during the intervals between nursing. No unfavorable results were noted in any instance.

Revue de Gynecologie, Paris.

Last indexed page 408.

58 (VII, 1.) *Sur l'utilisation de la leucocytose dans le diagnostique de certaines affections génitales de la femme. L. Bérard and A. Descos (Lyons).
59 *Phimosis du cervix par cloisonnement transversal incomplet de l'extrémité supérieur du vagin. Dysmenorrhée mécanique d'origine vaginale. C. Viannay (Lyons).
60 *Intravesical Segregation of Urine from Each Ureter. G. Luys.—De la méthode de séparation de l'urine des deux reins dans la vessie.
61 *Ibid. F. Cathelin and F. Legueu.—Resultats cliniques de la séparation endovésicale des urines avec le diviseur gradué.
62 (No. 2.) *Condition of Adnexa in Case of Uterine Fibromata. C. Daniel.—De l'état des annexes dans les fibromes utérins. (Commenced in No. 1.)
63 Etude clinique et anatomo-pathologique de la cholecystite calculeuse. V. Cornil and E. Schwartz.
64 *Enterectomie aseptique. Enterorrhaphie circulaire rapide par la suture; instrumentation et technique opératoire. E. Vidal (Périgueux).

58. **Diagnostic Value of Leucocyte Count.**—The findings were so constant in 25 cases of gynecologic affections in which the blood count was carefully studied that Bérard and Descos affirm with great positiveness that it is possible to determine by the leucocyte count whether or not there is suppuration and whether the germs are virulent or not. In affections in the female genital sphere when the leucocytes number 12,000 to 13,000 or more, with decided increase in the polynuclear cells—80 to 85 per hundred—some suppurative lesion exists or is forming, as, for instance, an infected hematocele. The pus is virulent. Intervention should be postponed if possible. If operation is necessary it should be by the vaginal route, and strenuous efforts made to prevent sowing the germs on the peritoneum. When the leucocytes number 10,000 or under, either there is no pus or it is scarcely at all virulent, and operation can be undertaken with the peritoneum walled off from the field with tampons and sponges. In case of profound infection, the leucocytosis indicates the moment for surgical intervention. While awaiting it the general condition should be improved, by injections of serum, fixation abscesses, etc., until the acute phase is past and the leucocyte count shows that the virulence is becoming attenuated. This is especially necessary in case of streptococcus infection. If the leucocyte count drops from 25,000 to 12,000 or thereabouts, the germs have lost their virulence or else the reaction on the part of the organism is so decided that the surgeon can operate without fear. Of course when there are other clinical symptoms of severe infection and the leucocyte count remains constantly low, the prognosis is grave as this signifies that the cellular defenses are unable to cope with the virulence of the infection.

59. **Vaginal Mechanical Dysmenorrhea.**—Menstruation proceeded normally for two years in the case described, but after an attack of scarlet fever it was always painful. Examination disclosed a stricture in the vagina just below the cervix, nearly obliterating its lumen.

60 and 61. **Segregation of Urine in Bladder.**—Luys' instrument has been used in 85 cases and Cathelin's in 83. Both give satisfactory results according to the writers, and are described in detail with 10 and 11 cuts and a colored plate.

62. **Condition of Adnexa in Case of Uterine Fibromata.**—Daniel concludes from anatomic study of 205 cases and analysis of 136 published, that the tubo-ovarian apparatus is pathologic in fully 59 per cent. of all cases of uterine fibromata, if not macroscopically, at least microscopically and histologically. There are evidences of inflammation in about half this number,

but in the others the influence of the fibroma is manifested in circulatory disturbances secondary to the action of the pelvic varicocele or to mechanical irritation of the peritoneum by the tumor or in the general influence of the neoplastic diathesis. Neoplastic affections in the uterus are, therefore, reflected in the adnexa as well as the inflammatory. In some cases the symptoms from the annexes are the first to suggest the tumor formation.

64. **Aseptic Enterectomy and Suture.**—Vidal thinks that he has solved the problem of opening the intestine late in the operation, with solid union of the two serous surfaces during the suture, and a firm support for the suture which does not have to be left in the intestine. After clamping and ligating, he resects the intestine and brings the two ligated stumps together. He inserts in each stump, close to the end, an instrument he has devised which folds together flat until it looks something like an ordinary buttonhook. The curved end is worked through a small buttonhole in the intestine close to the ligated stump. The instrument is then opened and the two half circles form a solid ring, which is pressed against the ligated end, stretching the lumen. A second, similar instrument is introduced into the other stump to correspond. The two stumps are thus stretched as if on hoops, and by pressing these two hoops together, the stumps are approximated and can be conveniently sutured. The ligature is tied in a special knot, which is untied by pulling on the end projecting through the buttonhole. Each hoop is then folded again into the flat semicircle and removed through the buttonhole, which is sutured. The loose end of the previously ligated stump spreads out into a narrow curtain inside the intestine after the ligature is removed. These curtains slough off but serve at first to protect the suture. The article is profusely illustrated.

Archiv f. d. gesamt. Physiologie (Pflueger's), Bonn.

Last indexed page 9

65 (93, 7-8.) Electro-physiologic Notes. O. Langendorff.—Elekt. phys. Mitteilungen.
66 Nourishment of Heart with Diluted Blood. Ibid.—Ueber den angeblichen Unfahigkeit des lackfarbenen Blutes den Herzmuskel zu ernahren.
67 *Alcohol as Protection Against Toxic Albuminoids. W. N. Clemm (Darmstadt).—Weingeist als Schutzmittel gegen giftige Eiweisskorper.
68 Zur Physiologie des Tetanus. I. Ueber die Muskeltone bei elektrische Tetanisirung des ausgeschalteten Frosch-Gastrocnemius. W. Brunings.
69 Embryologic Study of Bird's Egg. F. Tangl.—Zur Energetik der Ontogenese. I. Die Entwicklungsarbeit im Vogelei.
70 (9-10.) New Apparatus for Blood Count. W. Brunings (Zurich).—Neuer App. f. Blutkorperchenzahlung.
71 Psychologie und Medicin. E. Storch (Breslau).
72 Alkohol und Muskel-Kraft. L. Schyder (Berne).
73 (11-12.) Zur Physiologie des Labyrinthes. VII. Die Erzeugung von Schallbildern in die Camera acustica. J. R. Ewald (Strasburg).
74 Experimental Photography of Fundus of Eye. W. Nikoloew (Kazan).
75 Albumin in Organic Fluids. J. Joachim.—Eiweissvertheilung in menschlichen und thierischen Korperflussigkeiten.
76 Nochmals uber Protoplasma und Enzym. T. Bokorny (Munich).
77 Nerves in Ringer's Solution. H. Rietschel.—Berichtigung, etc.—Ueber verminderte Leitungsgeschwindigkeit des in R.'schen Losung uberlebenden Nerven.

67. **Alcohol as Protection in Disease.**—Clemm reviews a number of established facts showing the efficacy of large doses of alcohol in preventing injury from snake bites, etc., and the strange absence of alcoholic intoxication in these circumstances. He quotes Nothnagel's advice to treat incipient grippe with brandy. Runge has also advised large amounts of alcoholic drinks in puerperal fever. Brehmer advocated alcohol in febrile tuberculosis and Mircoli has recently argued in favor of its "sero-antitoxicity," and commended it as a valuable adjuvant in treatment of tuberculosis as mentioned in these columns. The efficacy of alcohol in these varied conditions may be explained by several hypotheses. It may precipitate the toxic substances in the blood and render them harmless, or it may influence the nerve centers until they cease to feel the influence of the toxins, or the molecular structure of the latter may be altered and the toxicity thus diminished. There is also a possibility that the osmotic tension may be altered by the alcohol and greater bactericidal power conferred on the more concentrated blood. In febrile affections, therefore, the value of alcohol is not so much to whip up the heart as to keep toxins away from the heart. The use of large doses of alcohol is apparently justified in diseases in which the pathogenic germs generate a toxic albuminoid. Study of the composition of the bacterial toxins generated in various diseases may suggest other valuable hints for treatment.

Berliner klin. Wochenschrift.

78 (No. 17.) Disturbances in Awaking. H. Pfister.—Ueber Storungen des Erwachens.
79 Das Verhalten des antitryptischen Vermogens des Blutserums bei der crouposen Pneumonie. M. Ascoli and C. Bezzola (Pavia).
80 *Ueber acute transitorische Aphasie. M. Rothmann. (Commenced in No. 16.)
81 (No. 18.) Elimination of Glycuronic Acid. M. Bial and F. O. Huber.—Zur Frage der Glucuronsaureausscheidung.
82 Peritonitis tuberculosa traumatica mit Ileus. R. Lucke. One case.
83 *Ueber Struma puerperalis. Malade (Treptow).
84 *Ueber die Polymyositis. H. Oppenheim (Berlin). (Commenced in No. 17.)
85 Die Prophylaxie in der Psychiatrie. A. Cramer (Gottingen).

80. **Transient Aphasia.**—Rothmann describes 3 cases of acute transient aphasia which emphasize the varieties of causes that may induce it. In one case the total aphasia appeared with an apoplectic attack. The subject had been exposed to the summer sun at noon, but as the disturbances did not occur until several hours later they were probably due to toxic substances evolved in the interim. There was total unconsciousness at first, the right hemisphere then rapidly recuperated and all symptoms vanished except the aphasia, which lasted for an hour. The second patient was a young physician who has since become a noted pioneer in the study of the brain. The factors in his case were overstudy, exposure to the sun, a fall from a horse and an unusually hearty meal. Pure motor aphasia was followed by agraphia and paraphasia, with complete recovery in less than an hour. In the third case total motor aphasia with right hemiplegia developed suddenly during convalescence from pneumonia and vanished completely in less than half an hour. The next day the aphasia returned with almost total right hemiplegia, both persisting for months. The capacity to sing was retained and nearly normal speech was regained in time by means of exercises conducted in singing tones. The heart was apparently intact in this case and the trouble was evidently due to embolism in the left hemisphere. The thrombosis probably originated in the pulmonary veins. This experience suggests caution in assuming that transient aphasia is of merely functional nature. It may be the result of toxic action from substances generated by external influences, emotions, traumatisms, overexertion, etc., as well as from embolism.

83. **Puerperal Struma.**—Malade has witnessed three cases in which the thyroid gland swelled in multiparæ during parturition. In one instance it was the direct or indirect cause of fatal anemia of the brain.

84. **Polymyositis.**—Oppenheim's five cases of polymyositis demonstrate that the mucosæ are affected as an essential feature of the affection. The mucosæ of cheek, tongue, palate, and conjunctiva are liable to be involved. The redness, swelling, pain, difficulty in swallowing and hoarseness were supplemented in some of the cases by multiple small ulcerations on the mucosæ. In one instance submucous hemorrhages left an Addisonian pigmentation. In another there was double iritis as well as conjunctivitis. He urges study of this form by ophthalmologists who may encounter abortive forms. Oppenheim proposes the name dermatomucomyositis for this affection and calls attention to a possible connection with syringomyelia. In one case the affection in a boy of 8 gradually assumed more the aspect of syringomyelia, and now, four years later, the clinical picture resembles more the latter. Others have reported very discouraging results from treatment, but energetic diaphoresis has accomplished wonders in his hands. He first applies hot air and then wraps in blankets, giving hot drinks and aspirin. The patient is thus sweated for an hour every second day at least, alternating with thermomassage and later simple massage, gymnastics and electricity. Improvement was soon marked under this régime, and complete recovery followed, although the last traces of the affection did not vanish in 2 cases until after a winter in the south.

Centralblatt f. Innere Med., Leipsic.

86 (No. 9.) *Seasickness. C. Binz (Bonn.)—Ueber die Seekrankheit.

87 (No. 10.) Ueber die spinale Metamerie in Bezug auf die Lokalisation der Amyotrophien. A. Bauer.

88 (No. 11.) *Cryoscopy in Liver Affections. L. Ferrannini.—Die Kryoskopie des Urins und Ascites bei Erkrankungen der Leber.

89 (No. 12.) Nature of Circulatory Disturbances in Collapse in Acute Infectious Diseases. K. v. Stejskal (Vienna).—Unt. uber die Natur der Kreislaufsstörungen im Kollaps bei acut. Inf.krankheiten.

90 (No. 13.) Study of Urobilin in Human Stomach. A. Meinel.—Ueber das Vorkommen und die Bildung von Urobilin im menschlichen Magen.

91 (No. 14.) Stagnation Hemorrhage During Epileptic Seizure. Z. Bychowsky (Warsaw).—Zur Kasuistik der Stauungsblutungen während eines epilept. Anfalls.

92 (No. 15.) Cardiotoxic Serum. L. Ferrannini.—Ueber ein für das Herz giftiges Serum. See abstract p. 1546.

93 (No. 16.) *Proportion of Urea in Transudates and Exudates. H. Ulrici (Halle).—Ueber den Harnstoffgehalt von Transsudaten und Exsudaten.

94 (No. 17.) *Transient Amaurosis in Lead Poisoning, Uremia and Eclampsia. J. Pal (Vienna).—Zur Pathogenese der akuten transitorischen Amaurose bei Bleikolik, Urämie und Eklampsie.

95 (No. 18.) Zur Genese der Urobilinurie. A. Meinel (Wiesbaden).

86. Seasickness Due to Anemia of the Brain.—Binz learned that a person taking a certain patent medicine vaunted as a preventive of seasickness, slept while under its influence and did not lose her ruddy coloring, and escaped her usual attack of seasickness. He analyzed the medicine and found it merely a mixture of chloral hydrate, of which 1 gm. was taken in three doses. The absence of pallor induced him to experiment on rabbits and he found that the blood in the ears and surface of the brain ebbs and flows synchronously. These and other facts which he details suggested to him that the cause of seasickness is merely anemia of the brain, to which the pallor testifies. It is a familiar fact that anemia of the brain induces nausea and vomiting; while chloral dilates the cerebral vessels and thus prevents anemia and hence might protect against seasickness. He does not attempt to explain why the rocking of the ship induces anemia of the brain, but is convinced that it does so. The retching and vomiting induced by this anemia in the brain call the abdominal muscles into play, and this in turn drives the blood back to the head and the symptoms are arrested for the time being. The stomach has only a passive rôle in seasickness and is incited to vomiting by the brain, regardless of whether it is full or empty. Everything that tends to promote and increase the flow of blood to the brain has a prophylactic, relieving or curative action in this affection. The brain should be nourished with strengthening food and the blood supply favored by the horizontal position and medicinally by drugs that dilate the blood vessels in the brain. Chloral hydrate, potassium bromid, amyl nitrite and antipyrin might be tentatively tried.

88. Cryoscopy in Liver Affections.—Ferrannini states that the freezing-point in 4 cases of atrophic venous cirrhosis ranged from —.55 to —.75 C.

93. Urea in Transudates and Exudates.—Ulrici found an average of .485 per cent. of urea in pericarditic effusions and .019 per cent. in pleuritic effusions.

94. Transient Amaurosis in Uremia, Eclampsia and Lead Poisoning.—The transient amaurosis sometimes observed in these different affections is due to the vascular tension common to all three. It vanishes as the tension becomes relaxed.

Deutsches Archiv f. Klin. Medicin, Leipsic.

Last indexed page 744.

96 (LXXV, 3-5.) *Genesis of Pulmonary Phthisis and Variability of Formation Designated "Tubercle." E. Aufrecht (Magdeburg).—Die Genese der Lungenphthise und die Verschiedenheit der mit dem Namen "Tuberkel" bezeichneten Gebilde.

97 Unusual Forms of Pneumonia. F. Galdi (Naples).—Pneumonia desquamativa obliterans. One Case. Pneumonia bei Stauung im kleinen Kreislauf und bei acuter Endocarditis. One case.

98 *Experimental Research on Heat Production.—Ueber Wärmeproduction, Wärmeregulation und Fieber. C. Hirsch.—Zur Methodik der thermo-elektrischen Temperaturmessung. Ibid. and O. Müller.—Beiträge zur Wärmetopographie des Warmblüters. Ibid.—Zur Wärmetopographie des curaresirten Kaninchens nach Wärmestich. C. Hirsch and F. Rolly.

99 Arrested Development of Limbs After Articular Rheumatism in Childhood. G. Hoppe Seyler (Kiel).—Ueber Entwicklungshemmung der Extremitäten nach Gelenksrheumatismus im Kindesalter.

100 Beitrag zur Kenntniss der primären malignen Tumoren der Pleura. C. Gutmann.

101 Beiträge zur Chemie des Sputums. F. Wanner.

102 Ueber alimentäre Albuminurie. Inouye (Rostock).

103 Study of Albuminoids Precipitated by Acetic Acid in Urine. Matsumoto.—Ueber die durch Essigsäure ausfällbare Eiweissubstanz in pathologischen Harnen. Beitrag zur Lehre der sogen. Nucleoalbuminurie und Globinurie.

104 *Influence of Pulmonary Tuberculosis on Length of Life and Working Capacity and Value of Sanatorium Treatment. E. Stadler (Marburg).—Einfluss der Lungentub. auf Lebensdauer und Erwerbsfähigkeit und der Werth der Volksheilstättenbehandlung.

105 Studien zur Bakteriologie der Lungen und Bronchioabteilungen. Beitrag zur Lehre von der Mischinfection bei Lungentuberculose. H. [illegible] (Munich).

106 Ueber die colorimet[illegible] des Eisens. Schwenkenbecher.

107 Zwei Fälle von chron. lymphat. Leukamie. H. Zinkeisen.

108 (No. 6.) Experimental Amyloid Degeneration. C. Tarchetti. Untersuchungen über exp. amyloide Entartung.

109 Early Diagnosis of Typhoid. E. Adler (Prague).—Zur Frühdiagnose des Typhus abd. durch die Milz-punction nebst einem Anhang über die Gruber-Widal'sche Blutserumreaction.

110 Chromic Acid Intoxication. R. Rössle (Kiel).—Locale Wirkungen der Chromsäure. Fall von acuter Chromsäurevergiftung.

96. Genesis of Pulmonary Tuberculosis.—Aufrecht is convinced that the germs enter the system by way of the tonsils. The passage of the bacilli into the blood is explained by the permeability of the intact vessel wall for tubercle bacilli from swollen and adherent lymph glands. This permeability is now established beyond question, and solves the problem of the migration of the germs from tuberculous glands in neck and mediastinum. He regards scrofula as the main factor in the predisposition to tuberculosis, and defines the essence of scrofula as a congenital or acquired enhanced permeability of the vessel walls for the elements of the blood and the bacteria circulating in it. The apex offers the most favorable point for the settling of bacilli that have found their way into the pulmonary arteries or veins on account of its defective circulation and also the stress of mechanical action. Sedentary occupations render the circulation in the apices still more defective than naturally. The apex also suffers from traction of muscles during exercise. Violent coughing causes a backward stagnation of air in the apices as they are covered only by soft parts, which do not participate in expelling the air. These factors may have injured the apex before the arrival of the bacteria. As they proliferate in some small blood vessel in the apex they make the walls thicker by their own bulk and disturb the blood supply in the parts irrigated by the vessel. The result is a little patch of necrosis in which the bacilli settle and the caseous tubercle is the result. It is the product of the combined action of the necrosis and of the bacilli. The area involved may heal after the necrotic caseous patch has been thrown off or transformed into a fibrous nodule. Healing is hindered by the irritation of the lung tissue from the presence of the caseous patch as a foreign element in the confined space. This irritation induces infiltration, and as this develops and spreads, pulmonary phthisis is established. The cavity is due to the breaking down of the infiltrated tissue, and treatment should aim to prevent or arrest these secondary pneumonic processes, with specific treatment to exterminate the primary bacterial agents.

98. Heat Production.—The results of the comprehensive research conducted by Hirsch, Müller and Rolly, at Leipsic, demonstrate that the glands, and especially the liver, have a larger share in the production of heat than has hitherto been credited to them. Among the phenomena that favor this view is the rapid disappearance of glycogen in the liver and the suspension of glycosuria during fever in a diabetic. There are evidently two parallel processes in the production of heat, 1, a specific destruction of albumin modified by the action of toxins, and 2, a central irritation or stimulation in the sense of the hyperthermia induced by puncture of a heat center.

104. Duration of Life and Working Capacity in Pulmonary Tuberculosis.—Stadler has collected statistics which show that tuberculous subjects live on an average at least six to seven years after infection. The course of the disease does not seem to be modified by injurious professional conditions, and hence a change of occupation is not imperative. Some degree of working capacity continues on an average until after the fifth year in about half of those affected. In his experience at the Marburg polyclinic, out of each 100 of the patients engaged in indoor work 23 were tuberculous; 22 in each 100 with out-of-door occupations, and 29 in each 100 of those engaged in trades with much dust, smoke, soot or vitiated air, except the stonecutters, of whom fully 50 per cent. of 151 were tuberculous. His statistics include 1,501 men and 851 women. Of this number 670, that is 382 men and 288 women, have been followed for a number of years. The course of tuberculosis was more prolonged in the women and in subjects engaged in indoor work, who are usually in better circumstances. Comparing these 670 cases with Weicker's 1,395 cases of pulmonary tuberculosis treated in the sanatoria, the results show that sanatorium treatment as at present conducted has prolonged by three years the working capacity of tuberculous subjects in the first or second stage of the disease in about a fifth to a fourth of the entire number. After the third or fourth year the mortality and loss of working capacity do not show the influence of the sanatorium treatment.

Mitteilungen a. d. Grenzgebieten d. M. u. Chir., Jena.

111 (II, 2.) *Functional Tests of Kidneys. J. Israel.—Ueber funkt. Nierendiagnostik.
112 *Ibid. L. Casper and P. F. Richter.—Was leistet die funkt. Nierendiagnostik? Reply to above.
113 *Phloridzin Test. J. Israel.—Ueber die Leistungsfähigkeit der Phloridzinmethode. Reply to above.
114 *Ueber Arthropathia psoriatica. C. Adrian (Strasburg).
115 Fistulæ in Course of Inflammation of Cecum. R. Mühsam.—Die im Verlaufe der Blinddarmentzündung auftretenden Fisteln.
116 *Ueber Pylorusstenose im Säuglingsalter. W. Freund (Breslau).

111 to 113. **Functional Kidney Tests.**—Israel warns against trusting too implicitly to the phloridzin and other functional tests which may impart a false sense of diagnostic security. The variations in the freezing-point and the phloridzin test frequently contradict each other, and repeated tests on the same person may give different results at different times. Rovsing ventured to remove a kidney in a case in which the phloridzin test was negative on both sides, and Israel has also done this twice, with complete success in all. The lack of any elimination of sugar does not necessarily indicate the loss of the physiologic functions in all cases. The freezing-point is not always invariable even in health, and has a wide range in varying circumstances in the same person.

114. **Psoriatic Arthropathy.**—Adrian applies this term to a multiple joint affection complicated with psoriasis and distinguished by its chronic course, the lack of influence of the salicylates and the frequent deformities and destruction of the joints which it may entail early. He has found records of 81 cases in the literature, and describes another personally observed. The patients were mostly males, usually between 40 and 45, affected with generalized psoriasis. No predisposing factor could be discovered in the histories except in a few isolated instances in which a central or reflex trophoneurosis might be incriminated. There was no evidence of an infectious character, except, possibly, the occurrence of exacerbations occasionally during the protracted course of the disease. No connection could be discovered between it and gout, gonorrhea or syphilis. Treatment should combat both the arthropathy and psoriasis and baths are beneficial for both. The mild forms with merely arthralgia are generally curable, but in the graver forms the prognosis is bad.

116. **Stenosis of Pylorus in Infants.**—Freund has been able to collect 10 cases of this condition in infants in which an operation was performed, with 7 permanent successes. Knöpfelmacher has published a case in which he discovered hyperchlorhydria with the stenosis and all symptoms permanently disappeared as soon as the child was put on whole milk. In others on record improvement was likewise obtained on change of diet. Freund has observed 6 cases, all breast nurslings. Case 1 was operated on, but soon succumbed, and the autopsy disclosed that the antecolic gastrojejunostomy and enteroanastomosis had been surgically successful, but ulcerations were found in the jejunum, the source of the fatal hemorrhages. In Case 2 the Günzburg reaction was always positive, and so soon as the child was taken from the breast and put on whole milk all disturbances ceased. In 2 of the children the stenosis proved rebellious to all internal measures and the children died. Another rapidly recovered when put on whole milk after cream had been removed, and in another the symptoms of stenosis vanished on administration of a tablespoonful of Carlsbad water before each meal. One of the children developed the stenosis while still under observation after birth, and it was unmistakably primary. Freund's experience indicates, therefore, that the stenosis is generally and most probably spastic. Carlsbad water should be given first and then whole milk, omitting the fat if necessary. If the weight still falls gastroenterostomy should be done without delay to allow the favorable moment to pass.

Wiener Klin. Wochenschrift, Vienna.

Last indexed page 1177.

117 (XVI, 13.) *Topical-Diagnostic Significance of Tickling Reflex in Brain Affections. A. Pick (Prague).—Zur topisch-diagnostischen Bedeutung des Kitzelreflexes bei cerebralen Affectionen.
118 *Zur Aetiologie der progressiven Paralyse. E. Raimann.
119 *Kasuistischer Beitrag zur operativen Behandlung der eitrigen Meningitis. H. Haberer.
120 Suppurative Thrombophlebitis from Carious Tooth. N. Damianos.—Eitrige Thrombophlebitis der Sinus cavernosi infolge von Zahnkaries.
121 Abscesses of Nasal Septum. E. Fuchsig.—Zur Aetiologie und Pathologie der Abszesse der Nasenscheidewand.
122 (No. 14.) *Die spastische Obstipation. G. Singer.
123 *Ein weiterer Beitrag zur Autointoxikationstheorie bei Hyperemesis gravidarum. E. Dirmoser.
124 Pankreastumor mit Duodenalstenose und schweren Ikterus. G. Lotheissen.
125 Determination of Total Purin in Urine. W. Hall (Manchester).—Zur klinischen Bestimmung des Gesamtgehaltes von Purin im Harn mittels Purinometer.
126 (No. 15.) *Moser's Scharlach-Streptokokkenserum. D. Pospischill.
127 Changes in Blood After Injection of Serum. F. Hamburger and E. Moro.—Ueber die biologisch nachweisbaren Veränderungen des menschlichen Blutes nach der Seruminjektion.
128 *Treatment of Relapsing Fever. J. Karlinski (Cajnica, Bosnia).—Zur Therapie des Rückfallfiebers.
129 (No. 16.) *Early Diagnosis of Pleuritis Diaphragmatica. R. R. v. Steultzer (H. Lorenz's Service, Vienna).—Zur Frühdiagnose der Pleuritis diaphr.
130 Reliability of Thermophor Apparatus for Keeping Food Warm. F. Schardinger.—Ueber die Zulässigkeit des Warmhaltens von zum Genuss bestimmten Nahrungsmitteln mittelst Wärme speichernder Apparate, sog. Thermophore.
131 *Ueber retrograde Inkarzeration des Darmes. A. Lange.
132 Plastic Reproduction of Stools in Gastrointestinal Affections. H. Roeder.—Die Einführung plastischer Lehrmittel in die Klinik der Magendarmkrankheiten.

117. **Tickling Reflex in Cerebral Affections.**—Pick describes a case in which a focus of softening corresponded with the hemiplegia observed and was also probably connected with the absence of the tickling plantar and axillary reflex on the side opposite to the focus. The latter was located in the frontal plane characterized by the corp. subthalam. The fibers involved were those connecting the thalamus and lenticular nucleus and these ganglia are the ones to which are referred the involuntary mimic movements and involuntary laughing. It is, therefore, logical to associate their degeneration with the absence of the tickling reflex. Pick thinks that this reflex has not heretofore been accorded the importance it deserves. Bleuler has reported a case in which symptoms of a cerebral lesion were accompanied by absence of the tickling reflex on the right side, and the left internal capsule was found diffusely degenerated. Bechterew also observed the absence of the tickling reflex in a cerebral affection, but without autopsy.

118. **Etiology of Progressive Paralysis.**—Raimann has been investigating this subject at v. Wagner's clinic, Vienna, along the lines suggested by Bruce and Robertson, that is, the theory that autointoxication from the digestive tract is the principal etiologic factor, and that the colon bacillus is involved in it to a large extent. Raimann's results were negative in so far as the agglutination reaction can be accepted as a test of the participation of the colon bacillus in the process.

119. **Operative Treatment of Suppurative Meningitis.**—Haberer describes a case of leptomeningitis involving the entire hemisphere of the brain in a woman of 36. The symptoms indicated a circumscribed process, secondary to a phlegmon of the temporal region, and, after first trephining, the skull and dura were opened up, but as far as the eye could reach there was the same suppurative inflammation. Each intervention was followed by marked abatement of the symptoms. The im-

provement in the general condition continued for two days after the last, but then the patient rapidly sank. The operations were performed by v. Eiselsberg and he is convinced that if he had been less cautious and had opened up the dura at first into sound tissue, it is possible that the patient might have recovered. He believes that the lesion was circumscribed at the time of the trephining and might have responded favorably to more thorough evacuation of the pus. Lumbar puncture after trephining was negative.

122. **Spastic Obstipation.**—Singer distinguishes between symptomatic and idiopathic spastic obstipation and defines the symptomatology of the latter and outlines the treatment. Purgatives and laxatives, even cascara, should be strictly forbidden, he states. The continuous use of saline purgatives is liable to increase the tendency to spasm, and especially courses of mineral waters. Mechanical procedures, massage and electricity are also contraindicated. Oil enemata are useful if taken warm enough. More permanent benefit can be derived from measures addressed to the nervous foundation of the trouble, particularly from hydrotherapy. The application of moist heat has proved very beneficial in his experience, a combination of a moist abdominal bandage and thermophore appliance. Hot cataplasms and sitz baths also have a favorable effect, but the sovereign remedy is belladonna, which he orders in the form of suppositories. His experience has been that the internal sphincter is usually the seat of the spasmodic contraction. For several years he has used English bougies, introduced into the rectum, when the constriction was in this region. He inserts the bougie in the knee-elbow position, sometimes preceding it with cocain or belladonna in case of very sensitive patients. It is occasionally impossible to pass it beyond the internal sphincter at first, but by leaving it for a time in contact with the sphincter it can then be readily passed through. Conical bougies meet with less resistance. The reaction is felt by the patient at first as a painful contraction and the bougie is held tight. In a few minutes the contraction subsides and the bougie can be twisted around. He begins with a small caliber and increases the size gradually. The results of this method of treatment have been so fine that he urgently recommends it to others for suitable cases. In a few instances he has found that the constriction vanished in the rectum but appeared higher up in the intestines. Generally the procedure, alone or associated with other measures, rapidly abolished the spasmodic contraction and induced defecation. Little can be anticipated from dietetic measures in spastic obstipation. On the other hand, change of scene, rest cures, relief from mental stress or worry and other means of reducing the nervous irritability will prove invaluable factors in the cure. Many persons who are constipated at home have no trouble in this respect when traveling. He states that in diagnosing the aspect of the stools is very important, especially the ribbon-like or grooved pencil-like forms. He has frequently noted blood in the stools, and in one case of enterospasm with kidney stone one of the attacks ended with the evacuation of a large amount of fresh and coagulated blood. There may also be strips of mucus. The contraction of the internal sphincter is the chief differentiating feature.

123. **Autointoxication as Cause of Uncontrollable Vomiting of Pregnancy.**—Dirmoser has long proclaimed this theory of the etiology and now reports a case in which a toxin was derived from the contents of the intestines so powerful that it killed the laboratory animals in three hours. Spontaneous premature delivery occurred at the height of the attack and the placenta was examined for a possible toxin, but animals inoculated with an extract of the placenta showed no signs of intoxication and remained as lively as before. The absence of a toxin in the placenta speaks against a fetal origin for the cause.

126. **Moser's Scarlet Fever Serum.**—This article describes the results of serum treatment at the Franz Josef Hospital at Vienna, and the writer joins the chorus of those who report marked benefit from its use. He reports the details of the 26 cases and emphasizes the mild course of streptococcus sepsis occurring two weeks after the injection, terminating in recovery. Out of 13 children considered moribund when received, 5 recovered after serum treatment, and 9 out of 12 with dubious to bad prognosis. The immediate results of the serum were always decline of temperature, diminished frequency of pulse and respiration, subsidence of delirium, tranquil sleep, the periphery grew warm and cyanosis disappeared. During the further course the necrotic patches became red, the fetor vanished partially or entirely and the children lost their very sick aspect. Even in the fatal cases there was always marked improvement after the injections.

128. **Saline Infusion in Treatment of Relapsing Fever.**—Karlinski noted that the addition of salt to a serum which agglutinated cultures of the parasite of relapsing fever immeasurably enhanced the agglutinating power. This suggested that salt might have a favorable effect on the course of the disease, and he reports the clinical application of this suggestion with results which apparently confirm the correctness of the assumption. In the epidemic of 890 cases he observed only 160 with but one attack, while 490 had two, 140 three, and 92 four. In his 5 cases treated by subcutaneous injection of 1,200 c.c. of a 1 per cent. saline solution in the course of forty-five minutes, none had a second attack, although the first had been very severe. He thinks it is possible that salt introduced into the system in some other way might prove equally effective.

129. **Early Diagnosis of Pleuritis Diaphragmatica.**—The character of the pains, the disturbance in the action of the diaphragm and a peculiar backward and energetic contraction of the upper portion of the abdominal rectus on one side, during inspiration, bringing into prominence the attachment of the muscle to the costal cartilage and the ensiform process, are the chief signs of this form of pleuritis, with distressing cough and considerable dyspnea. Stenitzer relates a case in which early differentiation of a serofibrinous pleuritis diaphragmatica was possible, and prompt treatment soon resulted in a cure free from complications. The pains are intense; they are located in the lower part of the thorax and radiate into the epigastrium, hypochondrium, etc., and especially into the sacrum and shoulder on the same side. The pain in the shoulder may be the first sign to suggest inflammation in the diaphragm. Mussy's "diaphragm point" was sensitive to pressure and also the phrenic nerve in the neck, in the 2 cases described. The high position of the diaphragm on the affected side was also striking, as likewise the abnormal excursions, the absence of transposition of the base of the lung during respiration, and also of Litten's diaphragm sign. Singultus has been frequently observed, but did not occur in Stenitzer's experience, except agonal in the one purulent fibrinous case.

131. **Retrograde Incarceration of Intestine.**—Langer reports a case which he qualifies as the first clinical case on record of "retrograde incarceration" of the intestine in which the mesentery of the intervening portion lay free in the abdominal cavity. Maydl has expressly denied the possibility of such an occurrence. The intra-abdominal complication induces local meteorism but no peristaltic movements in the region involved, and only an operation will reveal the two loops in the hernia. The intervening portion must be removed with the incarcerated loops as its blood supply will be impaired.

Medizinskoe Obozryenie, Moscow.

Last indexed page 812.

133 (LVIII, 16.) Simultaneous Erysipelas and Scarlet Fever. One Case. P. K. Haller.—Sovmyestnoe tetchenie rozhi i skarlatini.
134 Case of True Variola After Varicella and Vaccination. K. Fleroff.—Slutchai zabolyevanie naturalnoi ospoi poslye vyetrenoi i poslye vacciny.
135 *Tuberculous Intestinal Stenosis. A. V. Nikolski.—O bugortchatkovom suzhenii kishek.
136 Sho takoe "sarcome angioplastique Malassez i Monod"? G. V. Vlassof.—Study of path. anatomy of three cases.
137 (No. 17.) *Twenty-one Cases of Operation for Extrauterine Pregnancy. A. Eberlin.—21 slutchai operatzii pri vnyematotchnoi beremennosti.
138 Hypertrophy of Breasts During Pregnancy. One case. A. P. Kokhanoff.—Slutchai tchrezmyernova uvelitcheniya grudei pri berem.
139 Threatening Phlegmon of Throat Cured by Antistreptococcus Serum. A. Ivanoff.—Pervitchnaya phlegmona gortani lyetchennaya antistrept. syvorotkoi.

140 Reflex Affections Originating in Upper Air Passages. T. Stephanovski.—K kasuistikye zabolyevanii, proiskhodyashtchikh reflektorno iz verkhnikh vozdukhonosnykh putei.

141 *Affections of Upper Air Passages of Malarial Origin. L. Sverzhevski.—Zabolyevaniya verkhnikh dykhatelnykh putei malarylenova proiskhozhdeniya.

142 Study of the Refraction of the Blood. P. S. Usoff.—O refraktzii krovi.

143 (No. 18.) *Non-Malignant Tumors of Intestines in Children. B. A. Egiz.—O dobrokatchestvennykh opukholyakh kishetchnika u dyetei.

144 Case of Resection of Brachial Plexus. N. V. Sluyushin. Slutchai resektzii pletchevova spleteniya.

145 Study of Pathologic Anatomy of Case of "Frosted Liver" and Obliterating Inflammation of Pericardium and Pleura. V. S. Dyelitzki.—Slutchai tak naz. glazurnoi petcheni i oblit. vospaleniya okoloserdiya i plevry.

135. **Tuberculous Intestinal Stenosis.**—Nikolski reports a case personally observed and concludes from a study of the literature that this affection may cause gradually developing or suddenly acute symptoms or may run an entirely latent course. The clinical picture is that of dyspepsia or chronic diarrhea. It is most frequent between 20 and 40 and is usually secondary and located in the lower part of the ileum. Surgical intervention is the only treatment and should be prompt, with careful search for multiple strictures.

137. **Twenty-one Operated Cases of Extrauterine Pregnancy.**—Eberlin's patients all recovered. Laparotomy was done 15 times, colpotomy posterior twice, and incision of the posterior vault 4 times. The pregnancy was abdominal in one case, interstitial in another and tubal in 15, with hematocele in 4. The adnexa were removed on one side in 12 and on both sides in 2; uterus and adnexa in 1. He thinks that immediate laparotomy is required when the patient shows symptoms of what he calls "volcanic abortion," but when the volcano is merely smouldering, a favorable moment may be waited for, while a hematocele may be compared to an extinct volcano, the débris of which can be readily removed through an incision in the posterior vaginal vault.

141. **Malarial Affections of Air Passages.**—Coryza, cough, bronchitis and pleuritis have been observed in malarial districts, evidently due exclusively to the infection, as they were cured by quinin and were rebellious to other measures, including the usual expectorants. In the 4 cases described the first patient was a man of 46 with a severe, dry, spasmodic cough and malarial parasites in the blood, with a tendency to dyspnea and a sensation of oppression in the chest. The second patient complained of coryza, cough and fever, all the symptoms vanishing under quinin. The third patient presented symptoms of sudden pleuritis, vanishing with equal suddenness on exhibition of quinin. In the fourth patient the parenchyma of the lung was involved. These affections are observed most frequently in comparatively young persons residing in or recently arrived from malarial districts. The malarial coryza is distinguished by the marked variations in the morbid symptoms in the course of a single day. The nasal mucosa is red, dry and tender, or the symptoms may be those of hay fever. The cough is like a "nervous cough." The bronchitis may be catarrhal or "dry," the cough resembling that of pertussis. The diagnosis of the malarial origin is not difficult if the possibility occurs to the physician, and the rapid cure under quinin confirms it. Sverzhenski does not attribute these malarial manifestations to local toxic action but to the intermediation of the nervous system.

143. **Non-Malignant Intestinal Tumors in Children.**—Egiz reports a case of fibro-leiomyoma removed from the small intestine of a girl of 11. The tumor was rooted in the mucous membrane of the intestine and was the size of a mandarin orange. It developed without causing symptoms of constriction or occlusion and manifested its presence by giving rise to antiperistaltic movements, pains in the abdomen and vomiting two or three times a week for six months. There was occasional constipation, no fever, no tenderness. Nothing was found to explain the pains on an exploratory laparotomy, but as the antiperistaltic movements, pains and vomiting increased in intensity, minute palpation revealed a small tumor in the left side. A second laparotomy showed that the tumor originated in the mucosa of the small intestine, and it was easily removed. The little patient died four days later from septic peritonitis and the autopsy disclosed that there must have been invagination at the time the tumor was removed as a linear wound was found in the intestine a short distance above, evidently inflicted when the intestine was incised. Egiz reviews the literature on the subject of non-malignant growths in children's intestines, which may be of several varieties. In regard to polyps he states that in only 30, that is .01 per cent. of the 300,260 children admitted to the Olga Children's Hospital at Moscow, have polyps been found. No cases of benign tumors in the intestines in children have been reported in Russia, but he has found 6 cases mentioned in German literature. Pochhammer published the case of two brothers, one 15, the other 6 years of age, who recovered after ablation of an adenoma in the rectum of each. Clutton's patient was a child of 8 with a dermoid cyst in the sigmoid flexure. Hilter observed a case of adenoma in the submucous tissue of the ileo-cecal valve. The patient was a girl of 10, who died with symptoms of gastrointestinal catarrh. Buchwald has published a case of two large cysts in the mucosa of the small intestine which caused complete occlusion. The patient was a boy of 6 who died the day after the laparotomy. The largest diameters of the cysts were 17 and 10 cm. and the course of the case indicated that they must have been congenital.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology Chicago Post-Graduate Medical School. Volume V. Obstetrics. Edited by Reuben Peterson, A.B., M.D., Professor of Obstetrics and Gynecology University of Michigan. April, 1903. Cloth. Pp. 204. Price, $1.25 net. Chicago: The Year-Book Publishers.

A COMPLETE LIST OF THE DRUG STORES IN THE DISTRICT OF COLUMBIA. Arranged in Systematic Order for the Use of Traveling Men. By Fred T. Hafelfinger, 1110 Fourteenth St., N.W., Washington, D. C. Compiled from the Directory of 1903. Paper. Pp. 8. Price, $0.25.

THE ERRORS OF ACCOMMODATION AND REFRACTION OF THE EYE AND THEIR TREATMENT. A Handbook for Students. By Ernest Clarke, Fellow of the Royal College of Surgeons of England. Cloth. Pp. 225. Price, $1.75 net. New York: William Wood & Co. 1903.

THE REFRACTION OF THE EYE AND THE ANOMALIES OF THE OCULAR MUSCLES. By Kenneth Campbell, M.B., Edin., F.R.C.S. Eng., Surgeon to the Western Ophthalmic Hospital. Cloth. Pp. 214. Price, $1.75 net. New York: Wm. Wood & Co. 1903.

THE PRACTICAL DETAILS OF CATARACT EXTRACTION. By H. Herbert, F.R.C.S. Eng., Major, I.M.S., Professor of Ophthalmic Medicine and Surgery, Grant Medical College. Cloth. Pp. 109. Price, $1.25 net. New York: Wm. Wood & Co. 1903.

THE PHYSICIANS OF THE DISTRICT OF COLUMBIA. Arranged in Systematic Order for Detail Men. By Fred T. Hafelfinger, 1110 Fourteenth St., N.W., Washington, D. C. Compiled from the Directory of 1903. Paper. Pp. 21. Price, $1.00.

AMBULANCE WORK AND NURSING. A Handbook on First Aid to the Injured, with a Section on Nursing, etc. Profusely Illustrated. Cloth. Pp. 304. Price, $3.50 net. Chicago: W. T. Keener & Co.

HOW TO KEEP WELL. An Explanation of Modern Methods of Preventing Disease. By Floyd M. Crandall, M.D. Cloth. Pp. 511. Price, $1.50 net. New York: Doubleday, Page & Co. 1903.

New Patents.

Patents of interest to physicians, May 5 and 12:

727069. Atomizer. Carl Bomelsler, New York City.
726889. Artificial foot. George F. Ehrle, Milwaukee, Wis.
727344. Covered suppository and making same. David Genese, Baltimore.
727145. Sterilizing and packaging surgical absorbent dressing. Robert W. Johnson, New Brunswick, N. J.
727383. Joint for artificial limbs. Edward Koeber, Chicago.
727159. Catamenial bandage. Samuel P. Langdon, Philadelphia.
727467. Invalid bed. Walter C. Sennett, Portland, Me.
727570. Means for separating air from liquid in carbonating or other apparatus. Charles L. Bastian, Chicago.
728160. Hypodermic syringe. Thos. A. Chappell, Bronwood, Ga.
728091. Apparatus for forming tablets, etc. Emil Duhring, Berlin, Germany.
727949. Bed pan. Lena M. Hoffman, Philadelphia.
728112. Cabinet for eye-testing devices. John M. Johnston, Chicago.
727645. Dose indicator for medicine bottles. Norman S. Lea, Charleston, S. C.
728175. Dilating nozzle. Gustav Otto, Jersey City, N. J.
728003. Massage cup. Charles Pfanschmidt and J. Siefert, Chicago.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. A., under orders from the Adjutant-General's Office, Washington, D. C., for the two weeks ending May 23, 1903:

Ashburn, James K., contract surgeon, is granted leave of absence for one month from about May 1, 1903.

Barney, Charles N., first lieut. and asst.-surgeon, will proceed to Ft. Schuyler for duty.

Hartnett, Eugene H., first lieut. and asst.-surgeon, on his relief from duty at Ft. Columbus, will proceed to Key West Barracks, to relieve First Lieut. Charles N. Barney.

Lippincott, Henry, colonel and assistant surgeon-general, is granted leave of absence, to commence about June 1 for one month, with permission to apply for an extension of two months and fifteen days.

Pettyjohn, contract surgeon, is relieved from duty in the Department of the Columbia, and will proceed to his home, Augusta, Ga., for annulment of contract.

Reagles, James, contract surgeon, is relieved from duty at Ft. Snelling, and will proceed to Ft. Keogh for duty.

Roberts, D. M., contract surgeon, is granted leave of absence for one month from May 15, with permission to apply for an extension of two months.

Wall, Francis M., contract surgeon, is relieved from duty at Ft. Thomas, and will proceed to Columbus Barracks for duty, to relieve Contract Surgeon Harper Peddicord, who will proceed to Vancouver Barracks and report to the commanding general, Department of the Columbia, for assignment to duty in Alaska.

Wilcox, Timothy E., lieutenant-colonel and deputy surgeon-general, chief surgeon Department of the Columbia, will proceed to such posts of that department in Alaska as may be necessary on business pertaining to the sanitary and medical inspection thereof.

Bloombergh, Horace D., first lieut. and asst.-surgeon, is granted an extension of leave for one month.

Miller, J. E., contract surgeon, is granted leave for twenty-three days.

Pinkston, Omar W., contract surgeon, now at Kansas City, Mo., is relieved from further duty in the division of the Philippines and will proceed to Madison Barracks for duty.

Pease, F. D., contract surgeon, is granted an extension of leave to include June 30.

Rafter, John A., contract surgeon, is relieved from duty at Madison Barracks, to take effect on the arrival at that post of Contract Surgeon Omar W. Pinkston, and will then proceed to his home, West Winfield, N. Y., for annulment of contract.

Shepard, John L., first lieut. and asst.-surgeon, is relieved from further duty at Ft. Apache and will proceed to San Francisco, Cal., and report for assignment to duty at the U. S. General Hospital, Presidio.

Navy Changes.

Changes in the Medical Corps of the Navy, for the week ending May 13:

Surgeon F. W. Wieber, granted sick leave for two months.

P. A. Surgeon L. Morris, ordered to the *Minneapolis*.

Asst.-Surgeon R. H. Michels, ordered to the Asiatic Station.

Asst.-Surgeon E. M. Brown, detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Hospital, Newport, R. I.

Asst.-Surgeon J. H. Holloway, ordered to the *Baltimore*.

Dr. A. J. Geiger, appointed asst.-surgeon, from May 6.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 21, 1903:

Assistant Surgeon-General G. T. Vaughan, detailed to represent the service at the meeting of the Association of Military Surgeons at Boston, May 20-21.

P. A. Surgeon J. C. Perry, to report at Washington, D. C.

Asst.-Surgeon C. E. Decker, granted extension of leave of absence on account of sickness, for fourteen days from April 24.

Asst.-Surgeon R. L. Wilson, granted leave of absence for seven days from April 28, under provisions of Paragraph 191 of the regulations.

Asst.-Surgeon A. J. McLaughlin, granted leave of absence for two months from May 1.

Asst.-Surgeon W. K. Ward, granted leave of absence for three days from May 14, under provisions of Paragraph 191 of the regulations.

A. A. Surgeon C. B. Ford, granted leave of absence for fourteen days from June 3.

A. A. Surgeon A. C. Fraser, granted leave of absence for forty-five days, on account of sickness, from April 27.

A. A. Surgeon W. H. Marsh, granted leave of absence for seventeen days from May 8.

A. A. Surgeon W. O. Wetmore, granted extension of leave of absence for fourteen days from May 15.

A. A. Surgeon W. M. Wightman, granted leave of absence for three weeks from June 7.

A. A. Surgeon W. W. W. Wilson, granted leave of absence for fourteen days from May 14.

Pharmacist W. F. Schlaar, granted leave of absence for three days from May 10, under provisions of Paragraph 210 of the regulations.

BOARDS CONVENED.

Board convened at San Francisco, for physical examination of an officer of the Revenue Cutter Service. Detail for the board: P. A. Surgeon W. G. Stimpson, chairman; Asst.-Surgeon C. W. Vogel, recorder.

Board convened at Washington, D. C., May 25, for the physical examination of candidates for cadetship in the Revenue Cutter Service. Detail for the Board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General H. D. Geddings, recorder.

Board convened at Washington, D. C., June 15, for examination of candidates for admission as assistant surgeon in the service. Detail for the board: Assistant Surgeon-General G. T. Vaughan, Chairman; Surgeon C. T. Peckham; P. A. Surgeon H. S. Matthewson, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 23, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 3-16, 13 cases.

California: May 3-10, Los Angeles, 1 case; San Francisco, 4 cases.

Florida: May 8-16, Chipley, 9 cases; Jacksonville, 7 cases; Pensacola, 5 cases.

Georgia: Atlanta, May 6-20, 4 cases, 1 death.

Illinois: Belleville, May 11-18, 9 cases; Chicago, May 8-16, 8 cases, 1 death; Galesburg, May 8-16, 3 cases.

Indiana: Ellwood, May 10-17, 7 cases; Evansville, May 1-16, 6 cases; Indianapolis, May 8-16, 6 cases, 1 death; Kokomo, May 8-16, 1 case.

Iowa: Des Moines, May 8-16, 1 case.

Louisiana: New Orleans, May 8-16, 7 cases, 1 death.

Maryland: Baltimore, May 8-16, 7 cases.

Massachusetts: Lawrence, May 2-9, 1 case, 1 death (doubtful).

Michigan: May 8-16, Detroit, 33 cases; Grand Rapids, 2 cases; Port Huron, 1 case.

Minnesota: Winona, May 8-16, 2 cases.

Missouri: St. Louis, May 3-17, 17 cases.

Nebraska: Omaha, May 8-16, 1 case.

New Hampshire: May 8-16, Manchester, 1 case; Nashua, 1 case.

New York: Elmira, May 8-16, 1 case; Rochester, May 7-14, 2 cases.

Ohio: Ashtabula, May 8-16, 1 case, imported from Toledo; Dayton, May 2-16, 6 cases; Toledo, April 18-May 16, 31 cases, 1 death.

Pennsylvania: Pittsburg, May 2-16, 48 cases, 7 deaths; Philadelphia, May 8-16, 35 cases, 1 death.

South Carolina: Charleston, May 2-16, 1 case; Georgetown, May 20, 1 case.

Tennessee: Memphis, May 8-16, 3 cases.

Utah: Salt Lake City, May 8-16, 5 cases, 1 imported.

Washington, Tacoma, May 4-11, 2 cases.

Wisconsin: Milwaukee, May 8-16, 3 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, March 21-April 4, 11 cases, 2 deaths.

SMALLPOX—FOREIGN.

Austria: Prague, April 18-May 2, 11 cases.

Belgium: Antwerp, April 18-May 2, 6 cases; Brussels, April 25-May 2, 4 deaths.

Brazil: Rio de Janiero, April 19-26, 2 deaths.

British Guiana: Demerara, April 25, present and spreading rapidly.

Canada: Quebec, March 2-9, 2 cases.

China: Hongkong, March 26-April 3, 4 cases, 1 death.

Colombia: Bocas del Toro, April 28-May 5, 1 death.

France: Paris, May 1-8, 1 death.

Great Britain: Birmingham: April 25-May 2, 5 cases; Bristol, April 25-May 2, 3 cases; Dublin, April 30-May 7, 23 cases, 3 deaths; Leeds, April 25-May 2, 14 cases; Liverpool, April 25-May 2, 69 cases, 4 deaths; Manchester, April 18-May 2, 17 cases; Newcastle-on-Tyne, April 25-May 2, 1 case; Nottingham, April 18-May 2, 2 cases; Sheffield, April 18-May 2, 6 cases, 2 deaths; Sunderland, April 25-May 2, 1 case.

India: Bombay, April 14-21, 73 deaths.

Italy: Milan, March 1-31, 1 case; Palermo, April 25-May 2, 1 death.

Japan: Kobe, March 27-April 11, 3 cases.

Mexico: City of Mexico, April 26-May 3, 7 cases, 10 deaths.

Russia: Moscow, April 18-25, 5 cases, 1 death; Odessa, April 19-May 2, 4 cases, 1 death; St. Petersburg, April 4-25, 58 cases, 12 deaths; Warsaw, April 11-18, 3 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 12-26, 34 deaths.

Colombia: Panama, May 7-14, 3 cases, 1 death.

Mexico: City of Mexico, April 26-May 3, 1 death; Tampico, May 8-16, 1 case, 1 death; Vera Cruz, May 2-16, 11 cases, 5 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, March 21-28, 1 case, 1 death. Provinces, March 21-28, 164 cases, 93 deaths; not previously reported, 14 cases, 14 deaths; March 28-April 4, 201 cases, 141 deaths; not previously reported, 521 cases, 261 deaths; April 4-11, 64 cases, 35 deaths; not previously reported, 547 cases, 291 deaths.

CHOLERA.

Straits Settlements: Singapore, March 21-April 4, 13 deaths.

PLAGUE—INSULAR.

Hawaii: Honolulu, May 10, 1 death.

Philippine Islands: Manila, March 21-28, 6 deaths; March 28-April 4, 6 cases, 6 deaths.

PLAGUE—FOREIGN.

Australia: Brisbane, Feb. 1-28, 5 cases, 2 deaths.

Brazil: Rio de Janeiro, April 12-26, 1 death.

China: Hongkong, March 27-April 3, 28 cases, 24 deaths.

India: Bombay, April 14-21, 1,320 deaths; Karachi, April 4-19, 372 cases, 340 deaths.

Mexico: Mazatlan, May 14, 1 case.

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Address.

THE MODERN CONCEPTION OF ECZEMA.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON CUTANEOUS MEDICINE AND SURGERY AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT NEW ORLEANS, MAY 5 TO 8, 1903.

J. A. FORDYCE, M.D.
NEW YORK.

In comparing the views of modern dermatologists as to the types of inflammation of the skin which should be classed as eczemas, one is met with the most discordant opinions. Hebra undoubtedly accomplished a great service for dermatology in simplifying its nomenclature. His enormous clinical experience and power of observation enabled him to recognize that conditions which had before his time been called distinct diseases were in reality but different stages or phases of the same affection.

The modern tendency seems to be to break away from the extreme view of Hebra that all superficial catarrhal inflammations of the skin caused by irritants are eczemas. We are told that when the cause is known or apparent the inflammation is a dermatitis; when it can not be ascertained it is an eczema. If every one reacted in the same manner to irritants or if the effect always ceased with the removal of the cause the foregoing statements might appear less artificial. We know, however, that certain individuals are extremely susceptible to chemical, thermal or other irritants, while others show little or no reaction, even when they are applied in a more concentrated form or after prolonged exposure to them.

It is evident, therefore, that individual reaction, susceptibility or idiosyncrasy play an important rôle in the evolution of such inflammations.

Furthermore, a dermatitis from an external irritant may spread marginally, develop secondary patches or become generalized after the local irritant is removed. We can not, therefore, accept unreservedly the arbitrary definition that a dermatitis is the result of an external irritant, while an eczema is produced by some mysterious disturbance of metabolism.

It is often convenient, however, for purposes of instruction, to call an inflammation of the skin a dermatitis when its etiology is evident and it is sharply localized to the part where the irritant is applied. The more carefully we study our cases of superficial inflammation of the skin even when the cause is not at first apparent, the more convinced we become that the great majority of such cases are produced by the local action of some irritant which may be of chemical or microbic nature.

In either the so-called dermatitis, of which the cause is apparent, or in eczema, where we can not determine the etiologic factors, the clinical picture may be the same.

In both we have a superficial inflammation which is characterized by changes in the epidermis and papillary portion of the derma.

The intercellular edema, the parakeratosis, the vesicle-formation with resulting crusting and scaling, are common changes in both conditions. Why, then, should we employ such an artificial distinction as that used by many modern dermatologists, and say that here is a dermatitis because the involved skin has been subjected to a known irritant, and there an eczema because no local source of irritation can be found?

All the phenomena of inflammation can be experimentally produced by chemical or thermal agents under suitable conditions. The vascular dilatation, serous exudation, the migration of leucocytes with resulting changes in the epidermis and corium are found in a dermatitis from external irritants as well as in a so-called eczema of which the cause is not so evident.

If our clinical and pathologic pictures are the same, it would appear unscientific and unwise to insist on such artificial distinctions, except possibly as a clinical guide in the prophylaxis and treatment of such conditions. If we observe simply the objective features of a dermatitis without regard to its localization or its possible relationship to its bearer's occupation, it is difficult or impossible to say in what manner it differs from a so-called idiopathic inflammation of the skin.

A dermatitis excited by poison ivy may differ in no essential regard from an acute vesicular eczema of unknown origin.

We have all seen recurring vesicular inflammations of the skin in individuals who had at one time been the subjects of poisoning with this plant.

Are such eruptions due to the retention in the skin of the chemical poison of the rhus toxicodendron, to a new infection from the plant, or are they so-called idiopathic eczemas in a vulnerable patient?

In some cases we can with almost absolute certainty exclude a new infection from the plant, but the reaction of the skin in both cases may be exactly the same. It does not always, therefore, appear practicable to classify catarrhal inflammations of the skin from a strictly etiologic point of view. If we admit that catarrhal inflammations of the skin from local irritants differ in no essential feature from other catarrhal inflammations of the skin in which the etiology is not clear, we have a good reason for assuming that all such conditions may have a local cause; or at least we may say that there is as good reason for supposing that they are all local as for the other assumption that some may be constitutional.

We can not deny the possibility that eczema may be caused by some internal condition such as an infection from the gastro-intestinal canal or some disturbance in metabolism. It is unfortunately not possible to prove or disprove such a proposition. The view which is so widely held that eczema is a manifestation of the uric acid diathesis is equally vague and unsatisfactory.

All such general conditions which have been invoked to explain the occurrence of eczema may act as contributing factors in preparing the skin for the direct action of a micro-organism or its toxic products. This view is a rational one in the light of our knowledge regarding the pathogenesis of catarrhal inflammations of the skin of which the cause is known. The vessels of the papillary region react to irritants in the epidermis by dilatation and the outpouring of serum and leucocytes. The serum with its contained leucocytes is attracted to the irritating substance producing the phenomena to which we give the name of dermatitis or eczema. If the cause be a chemical or non-microbic one the dermatitis may cease with its removal.

If primarily microbic or if an infection be superadded the eruption may spread marginally or infect outlying or distant areas of the skin. It does not seem wise, therefore, to attempt to differentiate too sharply the so-called external types of eczema from the ones of which the cause is not at first apparent, for they may have identical clinical and histological features.

The wider our clinical experiences the more liable are we to find deviations from the typical varieties of eczema. We not infrequently see inflammations spreading from the scalp to the ears, face and upper portions of the body where no antecedent seborrheic dermatitis of the scalp existed. The scalp in individuals of uncleanly habits affords an excellent habitat for micro-organisms which, under favorable conditions, excite a spreading dermatitis. All eczemas which originate in the scalp are therefore not necessarily of the seborrheic type described by Unna. On the other hand, seborrheic dermatitis may originate on parts of the body far removed from the scalp and apparently independent of this source of infection.

In a general way we may divide and subdivide inflammations of the skin according to their etiology, site, clinical forms, etc., but we are constantly meeting with cases which are atypical in all of these respects.

The less definite our experience and knowledge, the more inclined are we to overestimate the importance of general conditions and neglect the causes which are apparent.

It is easy to say that eczemas are produced or modified by gouty states, indigestion or some indefinite general disturbance, but the more closely we study our cases in the light of modern knowledge as to possible sources of infection the fewer cases are met with which can not be better explained by some local toxic or microbic irritant. The majority of modern dermatologists admit that parasitic eczemas are met with which can not be differentiated from those of unknown causation. It would not seem possible in all cases or even in the majority of our skin inflammations to say that we can differentiate either by clinical or histologic features those caused by external irritants from the rarer forms in which the etiologic factor is not evident.

Admitting as we must, that the real cause in most of such inflammations is a local one, we should not overlook the importance of general conditions as contributing influences.

Patients suffering with nephritis or glycosuria, as we all know, are easily infected with pyogenic or other organisms. Alterations in the body fluids or tissues in these conditions render them favorable culture media for micro-organisms, consequently we are more apt to meet with erysipelas, boils or carbuncles in such individuals than in healthy ones. For the same reason chronic gastro-intestinal toxemia, anemia or gouty states may render the individual more vulnerable to the agent or agents which excite eczema.

We might with almost as good reason attribute erysipelas, furunculosis or other local infections to nephritis and glycosuria as to say that eczema is only due to such general causes as imperfect metabolism, gout or other morbid conditions.

In other words, if we claim for eczema a cause that must have its seat in the skin, the tissues are prepared for its action by a lowering of their resisting power.

This may be brought about, as we know from a consideration of other infectious processes, by purely local changes, or by some alteration in the fluids of the body.

Following inflammation of the epidermis and papillary body there is a remarkable increase in the irritability of the skin, which manifests itself by itching and other paresthesias. If irritants are applied to such an inflamed surface the morbid processes may be heightened and new centers of infection arise.

The development of such outlying patches have been explained by reflex irritation of the vasomotor centers.

For this and other reasons the nervous system has been supposed to play an active rôle in the evolution of eczema, and all causes which weaken the neuro-vascular tone are believed to render the individual more vulnerable.

Kromayer[1] attributes such importance to the irritability of the skin that he defines eczema as an atypical inflammation which is both the result and cause of an abnormal excitability of this organ.

Crocker,[2] because of the symmetrical outbreak of the disease and the involvement of definite vasomotor areas, is inclined to the belief that the nervous system is concerned in certain of its manifestations.

The symmetry of an eruption is by no means positive proof of the influence of the nervous system or of the constitutional origin of the malady. Scabies is a symmetrical affection, as are also certain eruptions from the local action of drugs or chemical irritants. A dermatitis excited by iodoform or arnica in a susceptible subject may rapidly spread and become symmetrical. It has been assumed in such cases that the outbreak on distant parts of the body is due to absorption and dissemination of the drug through the blood stream or through irritation of the vasomotor centers.

The latter hypothesis has been controverted by Csillag,[3] who has shown by experiments that when an irritant like arnica is limited to a certain spot its action is confined there. If a dermatitis appears on other parts of the body it is due to the accidental transference of the drug to that region.

The conclusions drawn from clinical observation are by no means free from errors, as witness the thousand and one causes which have been invoked to explain the affection in question, and which are largely the reflection of the views regarding pathologic problems prevalent at the time.

Eczemas follow or are associated with some general condition, therefore they are directly due to such a state;

they appear after a depressing mental emotion or shock, consequently the nervous system is concerned in their etiology. Such loose methods of reasoning lead us nowhere and serve only to confuse the problem. We have no experimental methods which can be employed to prove or deny such hypotheses, so that little progress is made by their elaboration.

Clearer ideas regarding the pathogenesis of eczema have been obtained by investigating the types of eruption which are now included in the eczema group. We have in this way gained a fairly well-defined clinical conception of seborrheic eczema and various forms of infectious dermatitis produced by staphylococcus and streptococcus inoculation.

In our search for a local cause in eczema we should by no means minimize the importance of all conditions, both general and local, which favor infection. In hospital and dispensary practice, where less attention is paid to cleanliness, infectious forms of dermatitis are more frequently met with. Among well-to-do patients metabolic disturbances may deserve more attention.

It is perhaps also well to bear in mind the manner in which different individuals react to irritants. After the ingestion of the iodids one person may develop an erythema or urticaria, another a pustular or bullous eruption, a third cutaneous or subcutaneous nodules. Rashes of similar or identical appearance may be called forth by a great variety of drugs.

Brocq,[4] from a consideration of these phenomena, has classified eruptions like urticaria, the erythemata, prurigo, lichen planus and vesicular eczema, as pure cutaneous reactions. His conception of such dermatoses is that they have no precise etiology but may be evoked by a variety of external or internal irritants.

The individual reaction or idiosyncrasy may, therefore, be added to the other general conditions which favor the development of an eruption or determine its type. It is impossible with our present knowledge to frame a single hypothesis which will explain in a satisfactory way the clinical group of inflammations that we are accustomed to class as eczema. The difficulty is further increased by the divergence of opinion as to what constitutes the disease. In Brocq's conception of eczema as a pure cutaneous reaction, he considers only the vesicular type. We have, however, forms of cutaneous catarrh, in which the vesicle does not appear, but where we find under the microscope the same vascular and epithelial changes which exist in certain stages of vesicular eczema. The agent which provokes the outpouring of serum may in one case have such a slight chemiotactic influence as only to give rise to an epithelial edema which stops short of vesicle formation.

The serotactic power of the irritant, on the other hand, may be so intense as to elevate large areas of the stratum corneum. Between these two extremes all grades of epithelial edema may be found, producing slight redness with scaling, vesiculation or large oozing surfaces. The same irritant acting on different individuals may give rise to a vesicular eruption, a scaling erythema or a most intense eczema madidans. It does not seem logical, therefore, to limit our definition of the affection, either from a clinical or histologic standpoint, to a purely vesicular eruption. The nature of the irritant as well as the resisting power of the tissues determines the gross appearance of the eruption.

Brocq's contention that true vesicular eczema should be classed with urticaria, the lichens, etc., as a pure cutaneous reaction, is rather a one-sided view of the question. The nature of the irritant is certainly of equal importance, though we may not be able to maintain with Unna that eczema is a distinct morbid entity always due to a specific agent.

LICHENIFICATION OF THE SKIN.

Little or no attention has been given by dermatologists in this country or England to the endeavors made by Vidal, Brocq and Jacquet and other members of the modern French school to differentiate the condition described by them as lichen simplex, lichenification or *névrodermite* from chronic eczema on the one hand, or lichen planus on the other.

Brocq in numerous contributions to periodical literature and in his article on the lichens[5] contends in a forcible way for the recognition of an independent dermatosis which is met with about the joints, back of the neck, inner aspect of the thighs, and other parts of the body. The condition in question occurs in neurotic subjects and first manifests itself as an obstinate pruritus. Under the influence of scratching the skin becomes altered in color, slightly thickened with deepening of its normal lines and the seat of numerous closely aggregated flat papules of a dull red color.

The papules are less well defined than those of lichen planus and have neither their polygonal outline nor their central umbilication.

Transitional forms are met with which are somewhat difficult to differentiate, but the two eruptions have quite characteristic features which enable them to be recognized by the expert diagnostician.

Névrodermite or lichenification is distinguished from chronic eczema by its peculiar manner of evolution and the absence of vesiculation or crusts. It is always preceded by localized itching and preserves an absolute dryness throughout its course. It is chronic, rebellious to treatment, and tends to relapse.

Lichenification may develop about a patch of chronic eczema, a lichen planus or other dermatoses and thus obscure the underlying condition. The clinical description of the affection with the details of diagnosis are fully considered in Brocq's[5] article and strongly support his contention that the dermatosis deserves a distinct place in dermatologic nomenclature. It is at least descriptive of a clinical condition which can in a certain number of cases be distinguished from lichen planus and chronic circumscribed eczema. In doubtful eruptions an examination of the oral mucous membrane will sometimes determine the diagnosis, for in this region lichen planus presents quite characteristic changes.

The writer has recently had under his care two cases of chronic thickening of the skin with hypertrophy of the horny layer involving the entire cutaneous surface. In both cases intense pruritus was present. Over the extensor surfaces of the joints, the gluteal folds and elsewhere the skin presented typical lichenification. No moist lesions were present in either case, nor was there any development of lichen papules. The histologic changes consisted of a chronic inflammation of the derma with a moderate acanthosis and marked hypertrophy of the stratum corneum.

The conditions described could neither be called chronic eczema nor lichen planus, but corresponded in all details with Brocq's generalized *névrodermite.*

STREPTOGENETIC AND STAPHYLOGENETIC DERMATITIS.

There is little doubt, in the light of modern clinical and bacteriologic research that many types of catarrhal inflammation of the skin which were formerly called

Original Articles.

MERCURIAL TREATMENT OF SYPHILIS.

A FURTHER CONTRIBUTION TO THE STUDY OF MERCURIAL INJECTIONS.*

M. L. HEIDINGSFELD, M.D.
CINCINNATI.

In the light of our present knowledge, success in the treatment of syphilis (at least in its earlier stages), is in direct proportion to the amount of mercury which the infected system can readily assimilate, without insult and injury. This knowledge, though purely empirical, has been so clearly and conclusively established, by centuries of observation and study, that it has become one of the most evident and acceptable of medical facts and so complete and successful have been the achievements of mercury in this direction that the experiments with serum therapy and the efforts to substitute other measures have been entirely devoid of practical results and have gained for themselves simply scientific interest.

Any shortcomings in its therapeutic powers must be imputed, in very large measure, to technical imperfections in its administration, and whatever definite progress syphilitic therapy has made has been along the lines of improved technical administration. That the administration of mercury has not been devoid of technical imperfections is clearly evident, not only from the various methods which have been employed for its successful administrations: through the skin, lungs, blood and lymph circulation and intestinal tract, but also because it has been used in innumerable simple and combined forms. It is equally evident that the technical imperfections, whatever their nature, were not of a character to impair the unqualified power and efficacy of mercury against the disease, but induced minor disturbances, purely secondary in nature, such as inconvenient or difficult administration, inaccurate dosage, and injury or insult to the organ, skin, lungs or intestinal tract against which it was particularly directed. The older forms, both inunctions and intestinal administration, have proven to be eminently reliable and efficacious, as far as checking the ravages of the disease is concerned. When failure has attended either of these forms of administration, non-success could usually be attributed to such causes as too excessive or too prolonged treatment or some grave form of complication. Efforts, therefore, to substitute methods and preparations were instituted more for the purpose of overcoming objections in technic than to achieve any great advance in efficacious action.

The oldest method, that of inunction, is objectionable because it is decidedly uncleanly, not only because a dirty ointment is rubbed freely over the body and frequent bathing is precluded, but because it soils the underclothing and bed clothes. It courts comment and publicity, predisposes an artificial dermatitis, is contraindicated in hairy individuals, and without the aid of an attendant is applied with some difficulty. Many of these objections are obviated by the wearing of mercurialized cloth (Blaschko[1]), or sacks filled with the remedy (Welander[2]), but neither of these methods have been demonstrated to be sufficiently active or reliable to merit special consideration; moreover, mercury being a volatile substance, these various methods are essentially an inhalation method of treatment, and as such are strongly contraindicated in hemoptysis and phthisis, which is also a serious objection to vaporization treatment (calomel fumes, etc.) in every form.

The internal treatment predisposes gastrointestinal disturbance, which is often sufficient to distress the patient, impair digestion, induce loss of weight, and thereby exert debilitating influences of considerable moment to the infected patient. The substitution of a long list of mercurial remedies for the pill mass, gray powder, bichlorid and calomel, in the form of biniodid, protoiodid, tannate of mercury, etc., and a more carefully regulated dosage, has been for the purpose of circumventing these objections, but has been attended with only partial success; moreover, whatever mercury is assimilated by internal treatment is carried directly to the liver, on which it not only exerts a deleterious influence but is in turn subjected to the altering, filtrating and eliminating action of the liver. Both inunctions and internal administrations are inaccurate methods, and it is impossible to determine how much or how little mercury is being assimilated in any given case. This is particularly true in internal treatment, when gastrointestinal symptoms supervene, a goodly portion of the mercury being prematurely carried away by the free discharges. Inspissated gelatin-coated pills or too strongly compressed tablets may not be assimilated and pass through the intestinal tract in unchanged form. Both the inunction and the internal method of treatment permit the patient to indefinitely continue, renew or discontinue treatment in accordance with his own volition, and thereby remove him from the regulating attention and vigilance of his physician which, in a disease prone to exacerbations, recurrences and grave complications, and accompanied by manifestations which are oftentimes overlooked or mistaken for other forms of affection, is a matter of most serious importance.

Most of these objections are entirely obviated by the injection method of treatment, and when Hunter and Hill[3] in 1856, Hebra[4] in 1864, and Scarenzio[5] in 1865, instituted mercurial injections, a new era in syphilitic therapy was marked. These investigations, on account of their severe painful character, were short lived and would have doubtless remained obscure had not Lewin[6] aroused new and well-sustained interest by his investigations in 1868, which were promptly confirmed by Sigmund[7] and Zeissl.[8] The injection method, though free from the many objections of the other methods, has not been entirely devoid of imperfections. Many of the attempts to employ this method have been short lived, and have gained for themselves a vast amount of unfavorable criticism. The innumerable forms of mercury which have been employed for injection purposes, metallic, bichlorid, calomel, yellow oxid, salicylate, sozoiodol, foramid, succinimid, bicyanid, glycocol, aspargin, alamin, thymolo-aceticum, and every form of combination, albuminates, peptonate, benzoates, suspensions in mucilage, oil of vaselin, paraffin, olive oil, lanolin, oil of sweet almonds, etc., bear abundant evidence that these imperfections not only exist but that their solution lies in an improved technic.

Time and space will not permit a careful consideration of the various causes of the non-success of the various preparations and methods which have been employed for injections; it will suffice to state that the most potent factors in their unsuccessful administrations have been too small and too oft-repeated dosage, which is too expensive and too time-consuming for the average patient; too severe and painful reaction, even to the degree of abscess formation; unstable character and difficult preparation of the remedy; danger of embolism and other grave forms of complication following its administration. A preparation which obviates these objections more successfully, I believe, than others has been the oleum cinereum, or gray oil after the formula of Lang.[9] In a preliminary report read before the Ohio State Medical Society and published in THE JOURNAL[10] of the American Medical Association, the marked advantages of this preparation in modified form, consisting of 3 to 4 parts of mercury to 1 part of lanolin, with just sufficient liquid albolene to render the preparation thin enough for injection purposes, were demonstrated from a series of 2,000 injections covering 240 cases of syphilis in clinical and private practice. Although intolerance was manifested in about 10 per cent. of the cases and the preparation did not possess the full desired degree of stability, I was so favorably impressed with its general excellence that I have continued to use it, as far as practical, to the exclusion of every other form of treatment. Subsequent study and experience has led me to make a few additional modifications, which have obviated the few remaining objections, and have placed it in such a perfected state that I am firmly impressed that it bids fair to ultimately supplant all other forms of treatment.

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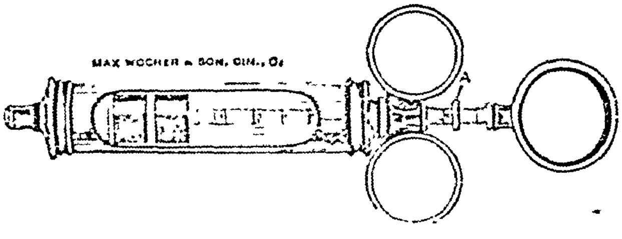
* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

These changes, and the causes which prompted their consummation, are as follows: In the 2,000 or more injections which were made with the original formula, although Lesser's[11] precaution to remove the syringe from the needle after its deep insertion, in order to test for hemorrhage, had not been observed, not the slightest symptom of embolism, in the form of syncope, cough, pain in the chest, dyspnea, etc., as first observed by Lesser[12] (1 case), and subsequently Lesser[13] (2 cases), Quincke[14] (7 cases), Lindstrom[15] (2 cases), Oedmansson[16] (12 cases), Blaschko[17] (3 cases), Möller[18] (28 cases), and innumerable others was ever noted. Inasmuch as the frequency of embolism, following injections, varies considerably with the experience of different investigators, Möller,[18] for example, has observed it 28 times in 3,835 injections, Neisser[19] once in 800, Epstein[20] 7 times in 8,292, and Harttung[21] but once in 8,000 injections, it can be seriously questioned on the one hand how carefully the symptoms have been observed and interpreted, and on the other how inadvertently overlooked. These facts did not inspire me with such confidence as to not take prompt cognizance of a symptom of such grave nature, however slight in character, and when J. S., aged 29 years, infected himself with syphilis in January, 1902, and underwent a course of mercurial injections in February and March and a second course in July and August, presented himself on Nov. 7, 1902, seven days after he had received the twelfth injection of the third course of injections, instituted Sept. 23, 1902, with a well-marked left-sided facial paralysis, my fears for an untoward result were momentarily, at least, realized. My fear was intensified at this juncture by Dr. Gilbert Bailey, who reported to me that E. P. M., whom I had seen with him in consultation, Oct. 29, 1901, relative to a very grave infection of syphilis which baffled all ordinary measures and whom a course of injections, at that time very materially benefited and for whom he had just administered a subsequent course of injections, had been suddenly seized with a paraplegia of the lower extremities while en route to New York. One physician out of three who had seen the case in consultation in New York City ascribed the paraplegia to the injections, the remaining two, however, dissented from this opinion. Although the symptoms manifested in neither case could be attributed to the injection, the first was a Bell's paralysis, due to a severe cold from which the patient was at that time suffering, as clearly demonstrated by means of immediate tests, and its very brief and uneventful course; the possibility of such an occurrence prompted me to eliminate as much of the danger as circumstances would permit.

The danger of embolism was all the more forcibly impressed on me at this time by some work in paraffin prosthesis which I was pursuing after the method of Gersuny,[22] and particularly by reports of embolism by Pfannenstiel[22] and others, in their experience with paraffin prosthesis. The mineral nature and exceedingly stable character of paraffin and its closely allied product, liquid albolene, which, by reason of its more fluid character, predisposes all the more strongly to embolism when injected subcutaneously, would impart not only antagonistic properties to any area where it would, perchance, find an unfavorable lodgement, but its future disintegration, absorption, elimination and removal would be definitely precluded, according to the interesting and carefully conducted experiments of Juckoff,[24] Hans Meyer,[25] et al., and the lesion would become more or less permanent in character. My prosthetic experiments also demonstrated that paraffin was more or less of a local irritant, and I attributed what little reaction my former mercurial injections induced, which was sufficient in about 10 per cent. of the cases treated, to warrant a change to some other form of treatment, in large measure directly to the liquid albolene.



I therefore determined to make the injections without incorporating liquid albolene, which has been accomplished, with every indication of complete success, for the past six months, according to the following formula and technic:

℞. Hydrargyri bidistill.*
Lanolin (Liebreich), āā 120
Conteratur usque ad perfectissimum extinctionem hydrargyri

Sig.: Inject one to three minims (deep gluteal or subcutaneous interscapular) twice weekly.

This preparation has the consistency of ordinary lanolin, and should be gently heated to about 100 F. before it is drawn into the open glass barrel of a hypodermic syringe. Great care should be exercised to carefully exclude all the air from the properly filled barrel; the syringe is then adjusted and armed with a 7/8 inch 22 gauge needle, the retaining screw (Fig. 1, A) run down, by which successive 1 to 3 minim doses are measured off for subsequent injections. If the preparation in the syringe is maintained at a temperature of 80 to 90 F. an ordinary 20 minim glass barrel syringe can be employed, otherwise an extra heavy syringe—an ordinary dental obtunding syringe (Fig. 1) answers admirably—should be used in order to withstand the pressure.

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* Bidistilled mercury, same as dentists employ for the manufacture of amalgams, should be used, which can be readily incorporated into an equal amount, by weight, of lanolin, in a few moments, by rubbing them togethed in a clean mortar, under ordinary aseptic precautions.

This preparation possesses perfect stability at all ordinary temperatures and insures the greatest degree of tolerance; although the remedy has been used, as far as practical, to the exclusion of every other form of treatment, and a thousand injections have, approximately, already been made, there has been relatively little localized reaction and induration and the patients take such little note of subjective pain or distress that they generally can not remember whether the last injection was made in the right or left buttock. A change to some other form of treatment has not been indicated in a single instance. Its semi-solid character (at 50 F. it can be expressed from the syringe in the form of a molded filament) minimizes the little danger that exists from embolism, and it is of such a nature that its complete absorption and elimination is ultimately assured.

The injection should be preferably made deep into the buttocks, perpendicularly to the surface of the skin, at its most prominent aspect, at three to four-day intervals, until 12 to 15 injections have been administered. The initial dose should contain about 1 minim, which can be gradually increased to 2 or even 3 minims (1 to 2 grains or more of metallic mercury to each injection). By this method relatively ten times more mercury is administered with each injection than with regulation 15 to 20 minims of the 1 per cent. bichlorid, foramid or succinimid solutions, and practically twice as much as the regulation injections of calomel, salicylate, thymoloacetate and yellow oxid injections.

In women the injections can be made interscapular, subcutaneously, and, though they are well tolerated, they are usually attended by a slight degree of reaction, owing to their more superficial deposition.

There is no plugging of the needles from the use of this preparation, which is an objection which has been raised against the use of insoluble injections (Bayet[26]). My personal experience impresses me that there is no indication for a progressive decreased dose or gradually prolonged intervals between injections, as urged by Ullmann,[27] Lang,[28] et al., in order to prevent accumlative effects and consequent unfavorable action in ptyalism, mercurial nephritis and allied complications. Mercurial stomatitis was avoided by exercising good care of the teeth, as far as practical; but when it did ensue, in a few instances, as it is frequently wont to occur, especially in clinical practice, its course was scarcely more severe or intractable than when it results from other forms of treatment.

In recent infections the injections were instituted with the appearance of the roseola, in accordance with the well-sustained views of Düring,[29] Taylor[30] and Watrezewski[31]: three courses of injections of 15 each are administered at four-month intervals the first year, two at six-month intervals the second year, one the third and one every two or three years thereafter.

Although the clinical results following the use of this preparation have been uniformly good, and the cases without exception showed prompt and marked improvement, not only in point of rapid amelioration of symptoms, but also in appetite, color and activity, followed by a state of well being that persists for many months after treatment is suspended, the good effects derived from this method do not differ materially, I believe, from those of other methods of treatment. It is simply the assimilated mercury which is effective in all cases and when non-success attends its administration it is due to such causes as faulty assimilation or its deleterious influences on the important organs or the system at large. In the injection treatment mercury is placed where it will do the greatest amount of good with the least deleterious effect, and the other natural advantages, in the way of cleanliness, control of patient, accurate dosage, should justly render it the ideal and popular method of treatment. The obstacles which have heretofore defeated this realization, intolerance, small and oft-repeated dosage, instability, difficult preparation and administration and distressing complications, no longer attain in this new form of treatment.

22 West Seventh street.

BIBLIOGRAPHY.

1. Blaschko: Berlin Klin. Woch., 46, November, 1868.
2. Welander: Archiv f. Dermatologie u. Syph., xlvi.
3. Chas. Hunter and Barclay Hill: London Lancet, 1856.
4. Hebra: Zeissl. Lehrbuch d. Constitut. Syph., Erlanger, 1864.
5. Scarenzio: Annali Universali, 602, 1865.
6. Lewin: Annal. d. Charite, xlv, 1868.
7. Sigmund: Wien. Med. Woch., 1870.
8. Zeissl: Lehrbuch d. Syph., 1870, p. 376
9. Lang: Lehrbuch d. Syph., 1890.
10. Heidingsfeld: JOURNAL A. M. A., Sept. 13, 1902.
11. Lesser: Deut. Med. Woch., 1894, 39.
12. Ibid., Viertelj. Zeitschr. f. Derm u. Syph., 1888, p. 909.
13. Ibid., Verhand. d. Deut. Derm. Gesell., 1889, p. 314.
14. Quincke: Berlin Klin. Woch., 1890, p. 401.
15. Lindstrom (Med. Rundsch): Abstr. Archiv d. Derm. u Syph., 1890, p. 735.
16. Oedmansson: Nord. Med. Archiv., 1891, Bd. xxiii.
17. Blaschko: Deut. Med. Woch., 1892, p. 965.
18. Möller: Archiv f. Derm. u. Syph., 37, p. 395, 1897.
19. Neisser: Archiv f. Derm. u. Syph., p. 336, 1899.
20. Ebstein: Allgem. Med. Central. Zeit., 1897, Nos. 49 u. 50.
21. Harttungg: Deut. Med. Woch., 1894, p. 601.
22. Gersuny: Zeitsch. f. Heilkinde, 1900, 1, No. 9.
23. Pfannenstiel: Centralb. f. Gyn., 1902, No. 2.
24. Juckoff: Archiv f. exper. Path., xxxii, p. 124.
25. Meyer: Münch. Med. Woch., 1901, No. 11.
26. Bayet: Jour. des Malad. Cutan. et Syph., 1895.
27. Ullmann: Wien. Med. Blatter, 1889.
28. Lang: Wien. Med. Wochenschr., 1889.
29. During: Monatssch. f. Prak. Derm., ix, p. 490.
30. Taylor: Medical News, December, 1889.
31. Watrezewski: Archiv f. Derm. u. Syph., xlvi, p. 21.

DISCUSSION.

DR. A. H. OHMANN-DUMESNIL, St. Louis—I am very much interested in the hypodermic treatment of syphilis because nowadays I confine almost my entire treatment to that method. I have better control of the patient and the dose of mercury he receives and the regularity with which it is received. I have been in the habit of using a solution of bicyanid of mercury and have never seen any untoward symptoms from its use. In over fifty thousand injections I have never seen a purulent complication. That is easily understood as the bicyanid of mercury is antiseptic. There is no particular pain, although when the solution is strong there may be pain lasting an hour or so, then it disappears. I think it is a good sign of lack of pain in the subjective symptoms when the patient comes back regularly for his injections. I put the patient through a course of from twenty to forty days, then give him a rest of fifteen or twenty days, then give him another course. With that method I have had the pleasure of seeing very good results. In some cases that were old, where there was a right hemiplegia, the paralysis disappears entirely, instead of having paralysis caused by the injections. Cases of syphilitic insanity give way in four or five weeks. In alcoholics and patients with homicidal impulses these symptoms disappear, and I have had patients under observation for five or six years who still remain clear in intellect and with no other symptoms manifest. Judging from these results the hypodermic method of treating syphilis seems to be successful—no untoward symptoms, good final symptoms and progressive improvement. I hardly think any other method could do as well. I agree with the reader that mercurial inunctions are dirty and not always adapted to the case. In Germany you can make these inunctions, the patient will go through his course, and in Hot Springs, Ark., you give him 25 packets, one to be rubbed in daily, and he takes a hot bath to eliminate the mercury, but you see him later on with rheumatism. You would not dare to predict a complete cure from a few injections, but they will predict cures from a few inunctions, which is not true, and if you read the reports they all publish you will find a number of relapses occur, and the treatment is begun again.

Dr. J. B. Kessler, Iowa City, Ia.—This is an ideal treatment, I should judge, but in practicing in a mixed district, country as well as city, the injection treatment would be impracticable in a large number of cases. With inunctions, protoiodid or bichlorid internally, the disease does not yield as readily as by injections. So in city practice, in properly selected cases or in rebellious cases I should judge the injection treatment would be desirable.

Dr. H G Anthony, Chicago—I never employ hypodermic medication as a routine method of treatment. It should only be employed in exceptional cases which will not yield to other methods of treatment or else in conditions which are dangerous to life. Under other circumstances it is my opinion that other methods should be employed. Ever since hypodermic medication has been used the profession has been endeavoring to find some new compound of mercury which was superior to any other Whether the one the Doctor advocates *to day is better* than those which have preceded we can only determine by actual experience, *but we do know that of all the compounds* of mercury used up to the present time none is so powerful as calomel, and therefore in severe symptoms of syphilis it is best of all to use It should be used in only a few doses, if two or three doses do not have the effect there is no use in carrying the method farther.

As to the technic, the Doctor plunges his needle perpendicularly to the skin It has been shown by Moller that with hypodermics of any oil thrown into the gluteal region of the cadaver and carried deeply one injection out of three enters a vein, and that is where there is danger from embolism. In their efforts to avoid an abscess they invented the method of carrying the mercury deep into the tissues, and in doing that the point of the syringe enters the vein and produces an embolus We can never tell when we will strike a case in which there is an idiosyncrasy to these poisons, where there will be intoxication This is seen in various cases, where it was necessary to incise the injection and curette the part to remove the mercury and its poisonous effects Should that become necessary it would be better to have the mercury deposited subcutaneously, and that can be readily done by using a long needle and depositing the mercury at least two inches from the entrance of the point of the needle. That is as good as carrying the mercury deeply

Dr Joseph Zeisler, Chicago—I do not feel like allowing this subject to pass without saying a word or two regarding *the undue* authoritative attitude which the reader of the paper assumes when he says he has used this method to the exclusion of all others, and hopes we will *adopt the method* The fact is, there is absolutely no method of treating syphilis on record which will surely promise the avoidance of a relapse, and that would be the only criterion, in my opinion. for a method we should be willing to adopt. We use mercury to day for the treatment of syphilis, unfortunately, I would say, because I am not in love with mercury as a remedy, I look on it as a very poisonous substance which we use for want of anything better. We use it in a symptomatic way; all we can accomplish is the removal of symptoms If Dr Heidingsfeld will undertake to treat a patient with hypodermic injections of this gray oil for years I admire his tenacity and the nerve of his patient Besides, we know that we can not surely cure syphilis with any one method, and it will not do to say one method is better than others; we know that many physicians treat syphilis successfully with internal administration of mercury *only, or with injections* of the bichlorid, or inunctions, which are not to be forgotten, and we have no right to put one method before another, the selection of this or that method is a matter of personal like and dislike.

I want to call attention to some defects in the Doctor's technic. In using mercurial injections I would never employ a *metallic* syringe. Mine are made of hard rubber, except the needle, which must be of steel. My needles are twice as long as these. I do not think the Doctor should urge his instrument and technic too strongly on those acquainted with the injection treatment of syphilis.

Dr. Ludwig Weiss, New York—As regards the choice between ointment or subcutaneous treatment of syphilis, I maintain that inunction is the dirtiest but the best method, and the fact that it is somewhat unclean ought not to deter us from using it. Whether or not absorption takes place by pressing the mercury *globules into the skin—globules* of mercury have been found in the follicles—is a moot question. I always use inunctions unless compelled, by other *indications* which forbid their use, to employ some other method. It is true that the injection method is clean; it is true *that we can* gauge our dosage and make it much surer, at the same time we store up mercury *in the system the action* of which sometimes we are not able to stop. It happened to me in one case, where *the patient* had a most vigorous elimination of mercury through the salivary glands, as much as three pints a day. The patient died later of brain syphilis and exhaustion If the patient had been on the injection treatment the stored up mercury would have increased and made uncontrollable this terrible salivation He was taking inunctions, however, and I stopped the treatment immediately, and so could stop the salivation. There is an advantage in using inunctions, inasmuch as you can stop the treatment and absorption of mercury In conclusion I will say *that* by the use of soluble mercurial preparations, like the bichlorid, we need not be afraid of embolism. I would always prefer to use the inunction method, but in using the injection method would recommend the soluble preparations.

Dr M. L Heidingsfeld, Cincinnati—Most of the objections which have been raised in this discussion, in regard to this method of treatment, have been carefully considered and, I believe, fully answered in *the body of the paper.* I have studiously avoided giving this preparation the preference over any other preparation of mercury, or this form of treatment over any other form of treatment, except on purely empirical grounds, clearly evident to any casual student of medicine. Whether *these preferences hold or not must be* determined, not by blind skepticism, but also by empiricism, gained from clinical experience. So many preparations and methods of treatment have already been tried and found wanting that a certain amount of skepticism relative to every new form of treatment is readily pardonable, and our preference is naturally for that form which has served us best. If the injection treatment has served best in rebellious and exceptional cases, it seems to me that there can be no valid reason for not using it in every case, unless it be that it distresses sorely or is poorly tolerated If it is mercury, and *mercury only,* which *is the effective agent in the treatment* of syphilis, I can not concur with Dr. Anthony that its salt, calomel, is more powerful, unless it can be proven that it is more easily assimilated, or can be administered in relatively larger dosage. The danger of embolism is, I believe, as I have endeavored to show in the paper, a very much overrated proposition. Moller's investigations and Lesser's views have been disparagingly criticised, notably by Harttung.* My personal experience of over 3,000 injections, without a single *well-defined instance, speaks for itself. Dr. Ziesler's* objections to the use of a glass metallic syringe are apparently not well sustained. There is but little metallic substance that is not protected by glass or the leather washers in the syringe for the mercury to attack. The most exposed area is the necessarily metallic needles, and if the Doctor is consistent he should not use injections at all. The greatest harm which could result from this action would be the gradual erosion of the syringe; the preparation, I believe, does *not materially suffer.*

In the preparation and presentation of this paper I have endeavored to carefully observe a conscientious conservatism in all its details, and I trust to the clinical empiricism of the future as to whether conservatism or fervent enthusiasm were the dominating features

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* Arch f. Derm u. Syph, xl, p 91

Rapid Transit Vibratory Massage.—The *New York Medical Journal* has found a bright side to the terrible jolting on the rough tracks for our municipal street railway systems. It recommends traveling for the purpose of securing the involuntary vibratory gymnastics, which are a fad in some quarters.

REPORT OF A CASE OF FIBROMA MOLLUSCUM.*

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PROFESSOR OF SKIN AND VENEREAL DISEASES, CHICAGO POLICLINIC.
CHICAGO.

NARRATION OF CASE.

The patient to whom I wish to direct your attention is a young lady, 25 years old, whose parents are living and healthy. She has several brothers and one sister, who are also in perfect health. No member of her family has had skin lesions similar to hers. There is no family predisposition to tuberculosis, carcinoma, malformations, developmental defects, nevi or insanity. Syphilis may be excluded. Her parents are well-to-do. She has always enjoyed the comforts of a good home, and has never been exposed to the inclemencies of weather. She has never done hard work. Her time has been spent in school and in travel. She has never had a severe illness, excepting spinal curvature, which necessitated the use of a spinal brace from the age of 10 to 16 years. She menstruated when 16 years of age and has been regular.

Present Condition.—The patient consulted me because of seborrhea of the scalp, which has recently caused considerable loss of hair, and also because of an eruption of the skin which has been present ten years. The eruption does not produce itching or other subjective symptoms; it is annoying simply because of its cosmetic effect. It does not appear in crops; it is a steady, continuous development, constantly increasing, never disappearing, but the increase is very gradual. It is imperceptible from month to month. It can only be noticed by comparing her present condition with her condition as it was several years ago.

On examination we find that there are two kinds of lesions present: spots of pigmentation and tumors.

Pigmentation.—The spots of pigmentation are lentigo-like, of a yellowish color, some being of such a light shade of color as to be scarcely perceptible, while others are like freckles, or the pigmentation of senile atrophy of the skin. The disease began ten years ago with the appearance of these pigmentary lesions. They are found scattered here and there over the chest, abdomen, back, arms, upper part of the forearms, thighs and upper part of the legs. They do not coalesce or follow the course of nerves. They occur sometimes in groups of six to ten, and sometimes they show no tendency to grouping. The individual spots are oval or rectangular in form. They are from pinhead to split-pea size, and somewhat larger. They are somewhat darker in the center than on the periphery.

The skin of the feet and lower part of the legs, the hands and lower part of the forearms is normal. The neck is thickly set with split-pea size pigmentations of a bronze color. The skin of the face is of a light bronze color, which, fortunately, is not mottled, hence it is not very noticeable.

The patient and the members of her family are very positive that this pigmentation of the face has been present since birth, and that only the freckle-like lesions are a later development. They believe that the skin of the face is of a darker hue simply because the patient is a brunette.

That it differs from the normal skin may be shown by the contrast of color when the back of the hand is placed near the cheek.

The Tumors.—These lesions commenced to appear seven years ago, and three years after spots of pigmentation were first discovered. They begin as flat plates of induration, of a doughy or pasty consistency, situated in the derma. They are oval or rectangular in form, with a long diameter of from one-half to one centimeter. The color of the integument covering the plates is sometimes normal, in which case they can best be detected by palpation. Sometimes it is of a pinkish or rosy hue. Sometimes the skin is slightly elevated, and sometimes there is no elevation. Sometimes plates develop beneath a spot of pigmentation, and again they do not.

Later, the central portion of the plates softens and becomes slightly elevated, presenting a pseudo-vesicular lesion surmounting the disk. In still older lesions this central softening increases, the pseudo-vesicular lesion becomes elevated one-half to one centimeter, and even more, forming a gelatinous teat-like tumor, the apex of which presents an opaque, mother-of-pearl appearance, resembling collodion or the umbilical cord, while the base of the tumors is covered with normal integument. Some appear as if they were about to rupture, a method of involution which has never been observed, nor have any of them disappeared, leaving scars.

The largest of these tumors (Fig. 2) is situated in the popliteal space of the left leg. It is the size of a hazelnut. One is quite convinced that, if incised, a jelly-like contents may be squeezed out, but such is not the case. They simply bleed profusely. There are about 100 of these tumors scattered irregularly over the entire body. A few are beginning to appear on the face; on the extremities they are situated mostly on the flexor aspect. There is one on one foot and another on a finger.

By placing a finger on one of these nipple-like tumors it may easily be pressed downward into the skin, conveying a sensation as if the integument is pierced by a hole; the wall of this hole is firm and formed by the peripheral portion of the tumor, which has not yet undergone softening. This peculiarity was also observed in Taylor's case. When released, the tumor springs back to its normal position.

On the back are three sessile fibroma molluscum, and one plaque of pigmentation larger than the lentigines. It is about two inches long and one inch wide. There is another similar plaque on one thigh. (See Fig. 2.)

On the anterior surface of the chest there are two or three punctate, bright red, elevated, telangiectases, angioma simplex of Virchow, angioma senilis of Dubreuihl.

The mental condition of the patient is normal. The mucous membrane of the mouth is normal. The finger nails and toe nails and hair are normal. The urine is normal. All visceral organs are normal. The pulse and temperature are normal. The thyroid gland is not enlarged, and there are no enlarged lymphatic glands. None of the stigmata of hereditary syphilis are present. There are no tumors about the eyes, and no pterygium.

POSSIBILITIES OF DIAGNOSIS.

We must consider the possibility of this being two distinct and separate diseases in the individual, one of which is a pigmentary disease and the other multiple tumors, and we must also study the case with the possibility in view that this is a single disease, producing both pigmentation and tumors.

Xeroderma pigmentosum requires no serious consideration where there are present lentigo-like pigmentations of long standing, without telangiectasis, atrophy and epitheliomata.

Lipomatosis subepidermalis universalis of Kromeyer,[1] might be considered in connection with the tumors alone.

Kromeyer, you will remember, observed a girl of 10 years of age, who, since infancy, had had lesions on the body, which the mother called blisters. The lesions looked like the bullæ of pemphigus, but were firmer. After incision, fat tissue was squeezed out and microscopical examination of excised tissue showed that the lesions were fatty tumors, situated in the derma.

In Kromeyer's case there was a greater resemblance to bullæ than in my case, and pigmentation was not present.

Inasmuch as Osler[2] has stated that pigmentation of the skin is a common event in splenic anemia, and as there is one case on record of fibroma molluscum in which splenic anemia came into consideration, the case of Webster,[3] the clinician should carefully consider this possibility of diagnosis in all cases where the pigmenta-

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

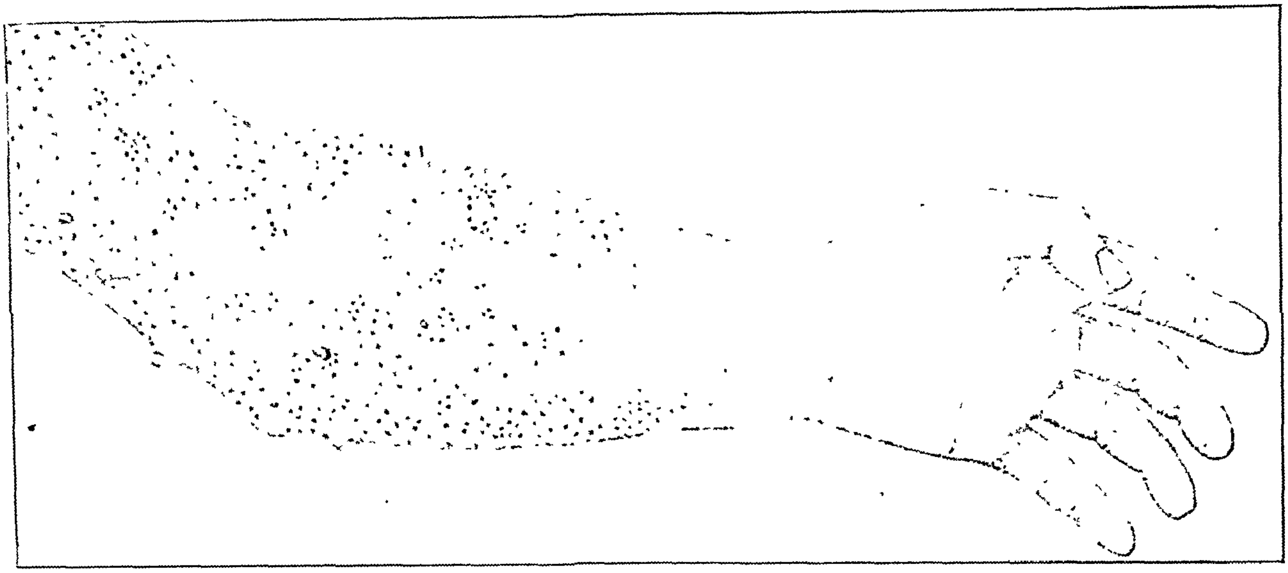

Fig. 1.—The lesions on the arm.

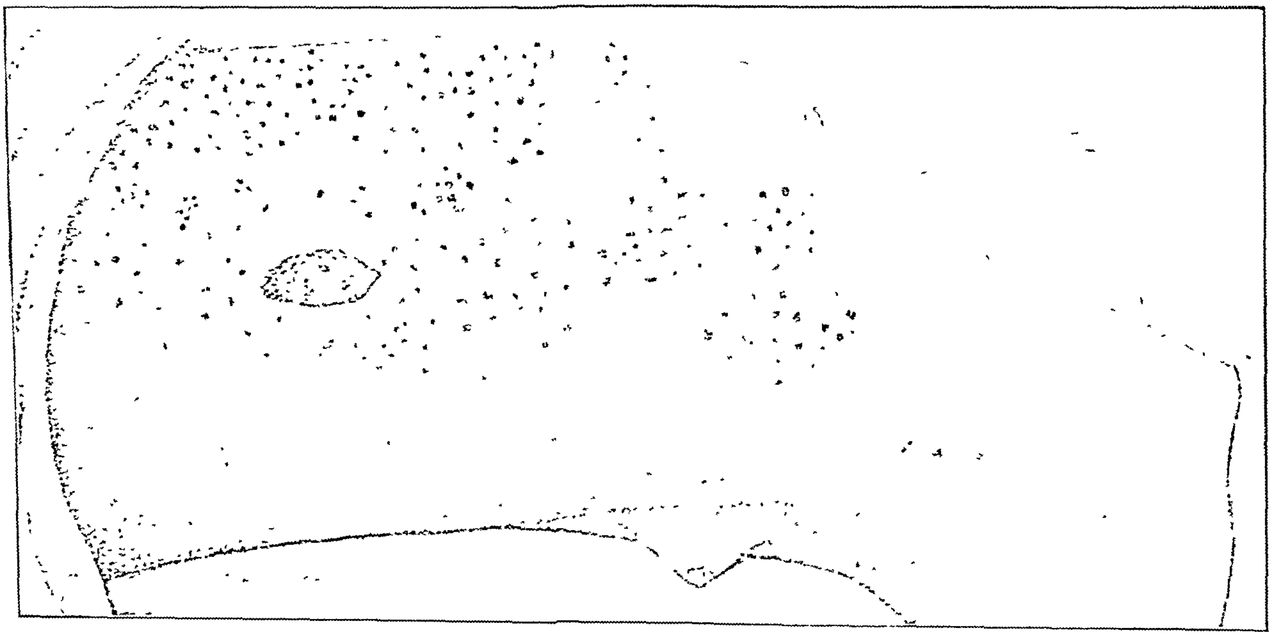

Fig. 2.—The lesions on the leg.

tion is accompanied by enlarged spleen and chronic anemia.

Osler describes the pigmentation of this form of anemia as being of a steel-gray color, like in argyria, and he states that it is possibly produced by arsenic.

Arsenical melanoderma could be excluded in my case, because of the fact that part of the pigmentation, that of the face, was present at birth and also because of the fact that the patient took no medicine before the freckle-like eruption appeared, when the patient was 15 year-old.

Colloid degeneration of the skin differs from our case in the fact that the tumors in that disease are waxy and not so large, so soft or so disseminate, and pigmentation is not present.

Addison's disease should be carefully considered as a possibility of diagnosis, as there are several cases on record in which cutaneous tumors were present, and also because it is possible that the statement of the patient and her family that the bronze pigmentation of the face was present at birth might be incorrect, and there are a few cases on record of freckle-like pigmentation occurring in Addison's disease.

The patient had what was diagnosed as curvature of the spine in youth. Why is it not possible that this was tuberculosis of the spinal column, or Potts' disease, and that we now have tuberculosis of the suprarenals? Examination of the spine shows no deformity or thickening of the bone. The disease has lasted ten years, and there are only two cases of Addison's disease on record which lasted that length of time.

Levin[1] says that the mucous membrane of the mouth is pigmented in 22 per cent. of the cases of Addison's disease. Those parts of the body in which we would especially expect to find pigmentation, such as the axillary region and nipples, are not especially involved.

Fibroma molluscum is the only other diagnosis which requires serious consideration, and it is also the only diagnosis which is sufficient to explain both the pigmentation and the tumors.

Pigmentation has frequently been observed in this disease. The tumors which we have described are not the ordinary pedunculated and sessile tumors of fibroma molluscum, but they resemble in many particulars the tumors present in Taylor's case.[5]

Microscopic examination confirms this clinical diagnosis. A spot of pigmentation and also pseudo-vesicular tumor were removed from the arm with a cutaneous punch. The specimens were hardened in Zenker's fluid, passed through Gram's solution, successive strengths of alcohol, imbedded in celloidin, and the sections stained by various methods.

The Pigmentary Lesion.—The stratum corneum is thickened, especially around the follicles. This thickening is not due to an increase in the number of layers of the horny layer of the skin, but to the fact that the individual cells of this layer are less compressed than normal. They are more hexagonal in form than in any other case of fibroma molluscum I have examined. This peculiarity of the stratum corneum is present in all parts of the pigmentary specimen, and also in the tumor specimen. Sections taken from the peripheral portion of the pigmentary lesion show the pigment irregularly scattered through the rete Malpighii, being present in abundance in some parts of a section and almost absent in other parts. It is located especially in the deeper layers of the rete and, in general, resembles the pigmentation of the negro. In the peripheral sections we note some tendency to the downward prolongation and dumb-bell shape of the rete pegs mentioned by Unna in describing pigmentary nevi, certain sarcomas and xeroderma pigmentosum.

On cutting the central portion of the pigmentary lesion, we are surprised to discover a microscopical-sized molluscum, the presence of which we did not clinically suspect. It is located around a sebaceous gland. It does not differ in structure from the tumor present in our tumor specimen. The epidermis over it shows far less pigment than sections taken from the periphery of the specimen.

The Tumor.—The mucous layer, especially over the central portion of the tumor, shows pressure atrophy.

Stained with polychrome methylene blue or by Van Gieson's method and examined with the lower power of the microscope, the tumor mass appears to be composed of a gelatinous or colloid mass, showing some fibrous structure in the peripheral portion of the tumor, but absolutely structureless in the central portion, until the diaphragm of the microscope is closed, when it may be seen that it is nowhere devoid of structure.

The gelatinous mass is thickly studded with strongly refracting nuclei of connective tissue cells. Mast cells are not present in this tumor. We have observed them in some cases of fibroma molluscum, always located on the border of the central gelatinous mass. We can not concur in the opinion of Unna that fibroma molluscum is made up of misplaced epithelium cells. It is my opinion that the entire tumor is composed of a myxofibrous connective tissue of embryonic type, the individual cells of which are occasionally round, but usually are spindle-shaped or else show various modifications of the spindle-shape, and that the nuclei which show such great power of refraction are the nuclei of these spindle-shaped embryonic connective tissue cells.

It is extremely difficult to obtain good preparations of the individual cell. The technic which proved most satisfactory in my hands is the following: A thin section is stained with hematoxylin and eosin. The collodion is dissolved out of it. It is shaken in a test tube for one-half hour. This tears the specimen. A minute fragment of the specimen is selected, teased with needles, and mounted in glycerin, or the specimen may be stained with polychrome methylene blue, in which case I decolorize in wood alcohol rather than in 33 per cent. tannic acid, which is employed by Unna.

I agree with those authorities who believe that fibroma molluscum is a developmental defect. Their point of origin has been the subject of much discussion since von Recklinghausen advanced the theory that they develop from nerve sheaths. I concur in the opinion of Crocker, who says that they may originate anywhere in the derma or subdermal tissue.

For some unassignable cause, the embryonic connective tissue cells which are spindle-shaped and have elongated nuclei, retain these characteristics in certain locations, and in extrauterine life these deposits of embryonic connective tissue develop, forming the tumors which we clinically call fibroma molluscum.

Being a developmental defect, we are not surprised that fibroma molluscum should exist in families, though this is by no means as common as some writers would have us believe, nor are we surprised that it should sometimes be accompanied by other developmental defects, such as asymmetrical development of the face, as in the case of Danlos,[6] or generalized ichthyosis, enlarged thyroid and nervousness, possibly Basedow's disease, as in the case of Hallopeau,[7] or fibroid tumors of visceral organs, or mental defect, as in a number of cases, or that accompanying the general pigmentation, the skin of the neck should present the appearance of xeroderma pigmentosum, as in the case of Brigidi,[8] or that there should be present patches, one-half of which were telangiectases and the other half pigmentation, as in Crocker's case.

I believe that telangiectases occur in association with fibroma molluscum far more frequently than is generally believed.

CENTRAL SOFTENING OF FIBROMA MOLLUSCUM.

The point of greatest interest in connection with the tumors of this case is the central softening which was present in the older tumors. Reasoning *a priori*, one would suppose that the central softening was due to degeneration analogous to that which may be observed in uterine fibroids; such is, however, not the case. I can find no difference in the histologic structure of those tumors which clinically show central softening from those which do not show central softening.

I believe central softening is due to location and the manner of growth. Where the tumor is superficially located and tends to spread laterally, as it increases in size, central softening will occur, while where situated more deeply and showing less tendency to lateral development, it will assume the ordinary forms of sessile and pedunculated or subcutaneous fibroma molluscum.

THE PIGMENTATIONS OF FIBROMA MOLLUSCUM.

In my opinion, pigmentation is just as much a part of fibroma molluscum as is tumor formation.

Stelwagon[9] is almost the only author of a text-book who describes these pigmentations. He says: "Other lesions sometimes associated are brownish pigmented stains, sometimes freckle-like, small or large areas, and *occasionally more or less defined discolorations.* While, as Wickham states, some authors touch on this feature, present in many cases, by others it is entirely ignored. In Wickham's eight generalized cases such pigmentary conditions were present in all."

Brocq[10] says that these pigmentations are nevi and that they are usually present in association with the tumors of fibroma molluscum.

Besnier[11] says the tumors are nevi, but makes no mention of the pigmentations.

There have been a good many cases reported in which pigmentations were present.

The pigmentations are of two kinds—large plaques and lentigines. The large plaques are the more common They have a distinct outline. They are dollar to hand size, and even larger, and present various shades of yellow and brown color. Sometimes there is but a single patch present, and sometimes the patches are quite numerous The back is their favorite seat of location

Why abnormal pigmentation should be present in some cases of fibroma molluscum and not in others is not known.

The histology of pigmentations occurring in association with developmental defects has not been sufficiently studied. Even in the latest reported cases of xeroderma pigmentosum and fibroma molluscum, the microscopic findings of the pigmented areas are not recorded

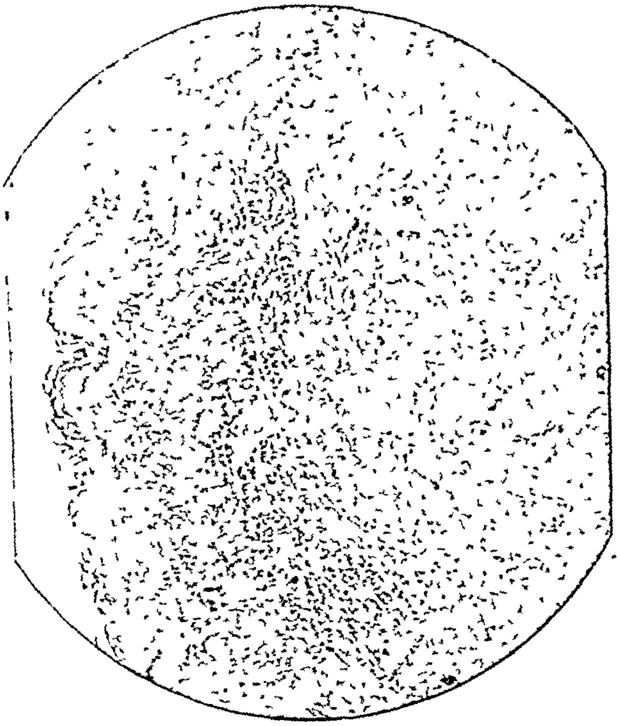

Fig 3 —Tissue under low power of microscope

Duhring[12] says "While, in the white race, pigmentation of the skin is due mainly to the deposit of pigmentation in the mucous layer, the connective tissue of the corium probably plays the principal part in its production This observation is particularly noticeable in pathologic conditions."

Fibroma molluscum, as is well known, is a common malformation in the colored race I have observed the large plaque variety of pigmentation on the backs of negroes on several occasions They stand out prominently from the general pigmented surface, because of a different shade of color. The freckle-like form I have only seen in the white race, it is rare, and when present is usually associated with large plaques and is apt to have an extensive distribution

Severe and wasting diseases sometimes precipitate the development of both the tumors and the pigmentations, in fact, patients often state that the first evidence of disease was observed after an illness. Careful questioning, however, usually elicits the fact that there were some lesions present since infancy.

I am convinced that some cases of this character have been reported as cases of Addison's disease associated with tumors, and where no disease of the suprarenal capsules was found on postmortem, arsenic has usually been assigned as the cause of the pigmentation. That there could possibly be any relationship between the pigmentation and the tumors is not mentioned in the report of any one of these cases. When once observed, the diagnosis of the pigmentation of fibroma molluscum is not a matter of difficulty Had my case been seen in infancy, at which time there were no lesions present excepting a light bronze color of the face, contrasting with the color of the general integument, we undertake to say that there are but few clinicians who would have diagnosed beginning fibroma molluscum, and yet this diffuse light pigmentation of the face is, in my opinion, one of the characteristics of this condition, worthy of especial attention, as I have seen it in other cases.

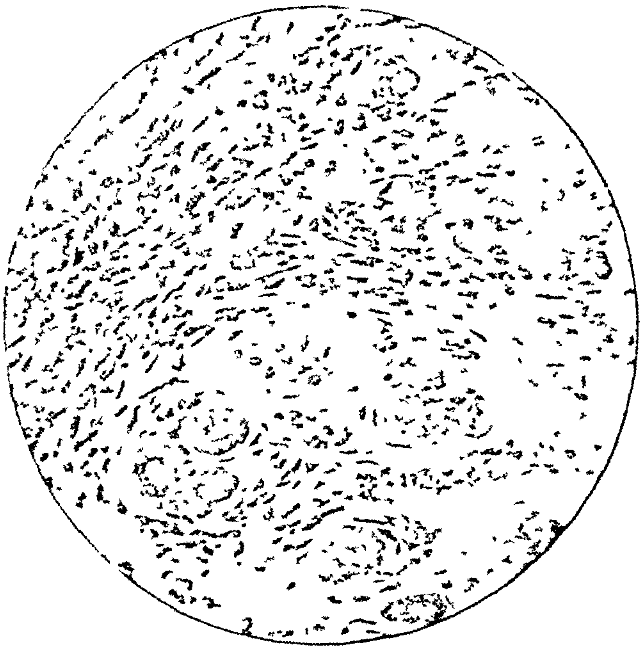

Fig 4 —Same High power.

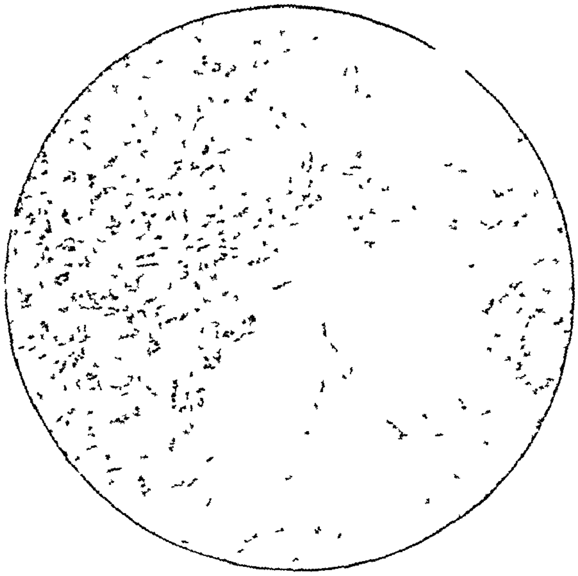

Fig 5 —Teased specimen of tissue

Cases may be observed in which tumors are present without pigmentations. Cases may be observed in which both tumors and pigmentations are present, and I believe cases may be observed in which pigmentations are present without tumors.

A few years ago I observed a lady who presented a peculiar pigmentation of the face. It was diffuse, of a light yellow shade of color, very noticeable, limited to the face and neck. I learned that she had always had this color and that her sister was afflicted in the same way. I examined both of these women, but found no evidence of fibroma molluscum in either of them; nevertheless, that was the only diagnosis I could offer.

Crocker[13] says: "Sangster showed a young man to the Dermatological Society, in 1893, who had extensive freckles and pigment patches of a square inch in size all over the body, buttocks and thighs, nearly to the knees. The face was free. It began in the first or second year of [illegible]. A brother had the same, and his mother, who [illegible] cancer, was similarly pigmented on the upper [illegible] the chest."

With [illegible] history and typical pigmentations, I would [illegible] to make the diagnosis fibroma molluscum [illegible] formation.

BIBLIOGRAPHY.

1. [illegible] Path. und Ther. der Hautkrankheiten, p. 186.
2. [illegible] of the Association of American Physicians [illegible] 113.
3. [illegible] A. M. A., vol. xl, p. 887.
4. [illegible] nales, 1892.
5. [illegible] Cutaneous and Genito-Urinary Diseases, 1887.
6. Da[illegible] de Dermatologie et Syphiligraphie, 1900, p. 394.
7. Hallopeau [illegible] de Dermatologie et Syphiligraphie, 1902, p. 613.
8. Brigide: Mona[illegible] f. Dermatologie, 1894, p. 190.
9. Stelwagon: Diseases of the Skin, p. 656.
10. Brocq: Traitement des Maladies de la Peau, p. 542.
11. Besnier and Doyen: Pathologie et Traitement des Maladies de la Peau, p. 315.
12. Duhring: Cutaneous Medicine, vol. I.
13. Crocker: Diseases of the Skin, Third Edition, p. 660.

DISCUSSION.

DR. M. L. HEIDINGSFELD, Cincinnati—Dr. Anthony's instructive paper appeals to my particular interest, because I have had occasion to report some clinical data and the results of a pathologic study of a typical case in the *American Journal of Dermatology*, July, 1900. This case also showed, in addition to hundreds of large and small sessile and pedunculated excrescences, a large number of pigmentations which closely resembled ordinary lentigines. Small areas of leucoderma were also in evidence. I endeavored to determine in the pathologic investigation the exact nature and the origin of these peculiar growths, whether or not they were derived from pre-existing connective tissue (Rokitansky) fat, (Virchow) or hair follicles (Fagge). No special technic was employed in order to attempt to confirm von Recklinghausen's opinion that they are neurofibromata and are derived from medullated nerve fibers. My efforts were particularly directed to determine whether or not these forms of growth could be distinctly classed with the fibromata or connective tissue tumors. Connective tissue reduplication in the form of tumor formation is one of the rarest conditions encountered in dermatology, which is remarkable when we consider with what frequency and facility the other elements of the skin, glands, epidermis, fat, etc., reduplicate themselves. There is only one distinct form which can be readily classed with the true fibroconnective tissue tumors, and that is true keloid. False keloid, because it shows no tendency to enlarge or progress beyond a certain point, can scarcely be classed with the fibroconnective tissue tumors. The cells of the molluscum fibromata contained irregularly or oval-shaped nuclei, uniformly distributed in an almost homogeneous intracellular substance, which is faintly fibrillated, but the fibrils can not be traced to any distance, as in the case of the ordinary forms of fibroconnective tissue, and even embryonic connective tissue. Although the cells are somewhat spindle-shaped, there is no marked progressive change towards elongated connective tissue-like spindles, and nowhere is there any evidence of a distinct connective tissue formation, which is an important link, when we try to class these growths with the embryonic connective tissue group. There are many minor distinguishing features which also serve to distinguish these growths from each other and place them in separate classes. In other respects my findings conform to those of Dr. Anthony. Hair follicles were present, but showed no cystic dilatation and no hypertrophy, but rather pressure atrophy. Mast cells were abundantly present, particularly at the periphery of the growth in the surrounding connective tissue.

DR. L. DUNCAN BULKLEY, New York—In regard to therapeutic measures in these cases of molluscum, we know nothing to do for them as a rule but excision. I have a man under my care who must have had many thousands of these little tumors. I have been using on some of these little tumors a high-frequency electric current with a carbon electrode. The effect of this is to inflame them and cause a superficial slough; under this many of them have shrunken down and are disappearing. As far as I know this is a new method of treating multiple fibroma. In the three or four weeks I have been applying this method many of the tumors have shrunken and disappeared. I merely suggest it, but would like to have those who have static machines try it.

DR. JOHN A. FORDYCE, New York—I find among the photographs which I brought to the meeting one which is almost a counterpart of Dr. Anthony's. I have seen two cases of molluscum fibrosum with pigmentation of the skin of the type he describes. Minor grades of pigmentation in connection with the affection are not so uncommon. The development of the two conditions are probably closely related.

DR. HENRY G. ANTHONY, Chicago—In answer to Dr. Heidingsfeld, I excluded xeroderma pigmentosum. There is no leucoderma in this case; I did not mention it because I was not trying to embrace everything known regarding fibroma molluscum. The histology of fibroma molluscum has long been a subject of discussion and a great many men have worked along the line of trying to determine what relation it has to the nerves. They have not paid sufficient attention to the histologic structure of the cells. When I had separated the individual cells so that I could see them I concluded they were embryonic connective tissue cells; they resembled that more than anything else. I took my specimen to a general pathologist and asked, "Do you think those are embryonic connective tissues?" He said, "Certainly! where did you get them?" Then I consulted another man without telling him where I obtained the tissue, and asked him what it was. He said the same thing. The idea I have in mind is this: We know that the cells of the embryo are first round and then they become spindle-shaped with a marked nucleus, and under normal conditions these embryonic cells are transformed into connective tissue cells in the latter part of intrauterine life. For some reason, possibly the presence of the toxins of the chronic infectious diseases, this change does not properly proceed in certain locations, scattered here and there over the surface of the body. Then the individual is born with deposits of embryonic connective cells, the presence of which is not suspected until the system is subjected to a severe strain, such as puberty, as in my case; then these hidden deposits of embryonic connective tissue grow and produce the tumors which we call fibroma molluscum. Supposing the strain which caused these deposits of embryonic connective tissue to develop should be tuberculosis of the apex of the lung, when the diagnosis which has always been made up to this time has been tuberculosis of the lung, pigmentations of Addison's disease, from tuberculosis of the suprarenal capsule and "tumors which the dermatologist calls fibroma molluscum." In other words, the clinician does not realize that there is a relationship between the tumors and the pigmentation. As I have shown, any pathologic condition of the derma may cause a hypertrophy of pigment in the epidermis, hence were concealed deposits of embryonic connective tissue cells present in the derma they could easily produce a case in which pigmentation would be present without tumor formation.

The case Dr. Fordyce shows closely resembles mine and the fact that pigmentation was also present in his case should convince every one that I am right in stating that it is an essential part of fibroma molluscum.

THE TREATMENT OF LEPROSY.

DISCUSSION ON THE PAPER READ AT NEW ORLEANS BY A. H. OHMANN-DUMESNIL, ST. LOUIS.*

Dr. Jay F. Schamberg, Philadelphia—Some of those present will doubtless remember the reports published by Dr. Dyer a few years ago on the results of antivenomous serum in the treatment of leprosy. I had occasion, three or four years ago, to use in the Municipal Hospital of Philadelphia some antivenene, obtained from Dr. Calmette of Lille, France. The leprous patient received 9 injections of this serum, each injection being followed by a febrile reaction. At the end of the ninth injection the temperature rose to a considerable degree and the patient passed through a long febrile course which was recognized as a typical typhoid fever, which disease was prevailing to an alarming extent in Philadelphia at the time. The development of typhoid fever was, of course, a pure coincidence. The leprous manifestations were not influenced by the serum nor by the typhoid fever, and the fever itself was not in any way modified by the chronic infectious disease from which the patient was suffering.

Dr. J. H. Duncan, St. Louis—We do not see much of leprosy in St. Louis. About two years ago I had a patient living in one of the Gulf cities. I exhibited the case to our Willan Dermatological Society. Examination was made of sections from the nodules by Dr. Engman, and it was pronounced leprosy. One case of leprosy from St. Louis had been to Unna and returned after two or three years apparently cured; there were no lesions and the patient seemed well, as our cases of syphilis seem well. I was not prepared to treat leprosy, and at the suggestion of Dr. Engman I referred this lady to Unna, and she went. That is over two years ago, and she has written me probably three letters, each letter stating that she is improving, the disease is disappearing, but the Doctor tells her she must stay a year or two longer. A few months ago her brother came to me with letters and pictures from her, photographs of the condition of parts of the body taken when she went to Unna and of the same parts taken eighteen months after she went there, and the change in the appearance of the part to me, who am not very familiar with leprosy, was most marked. She wrote most glowing letters about the disappearance of the lesions.

Dr Dumesnil speaks of a cure. I do not know what he means, but the case which came back from Unna three years ago is to all appearances well. I am told he still takes internal medicine.

Dr. M. P. Vanderhoeck, Minneapolis—I have had some experience with leprosy in Minneapolis. We have in Minnesota on record some 78 or 79 cases, mostly among Norwegians. In the treatment of those under my care I use local applications of chrysarobin, and I have seen nodules disappear in a day or two by being covered with chrysarobin paste. We have gotten good results from chaulmoogra oil; it always improves them. I had one patient who had lost one eye and had ulcers all over the body, the nodules being very pronounced. At the time he came under my care he weighed 120 pounds; he was taken to the City Hospital and isolated. We put him on chaulmoogra oil, with good food and hygiene, and later on he weighed from 190 to 200 pounds, and kept in good health ten years, until he died from an attack of pneumonia. None of these cases has been cured; relapses would come after the medicine was stopped, and sometimes the symptoms were graver than before. We have no ideal treatment for it; there is no cure we know of, but we all hope much from serum therapy. Our health officer has been watching the cases throughout the state, and with improved hygienic conditions is getting good results. The first case I mentioned came under my care in the fall of 1888, and I had him under close observation for ten years. He died in good condition so far as the leprosy was concerned. Others have died from tuberculosis.

Dr. J. N. Roussel, New Orleans—I would like to report a case in a man treated with chlorate of potash. The man was 50 years old. He had had the disease two or three years. The foreleg and feet were very much tumefied from about the middle third of the foreleg, with many ulcers present. The hands were also badly involved with tubercles and ulcers. The disease was of the tubercular type, and, strange to say, one side (the right side) was always worse than the other. He had lost the power of sensation entirely. I could apply the cautery to him without pain. After two months' use of the chlorate of potash the tumefaction began to disappear, sensation began to return, the ulcers all healed, and to-day, after about a year, he seems to be apparently well. He has no ulcerations, feels well, sensation is normal, and in every respect he is apparently well.

Dr. John A. Fordyce, New York—In the class of infectious granulomata to which leprosy belongs it is not unusual to see the tumors disappear by spontaneous involution. We see it in syphilis. I have had a good many lepers under observation in the hospital, and under better hygienic conditions and chaulmoogra oil the tumors disappear, but they usually come back again, while the patient's general condition grows worse. I have personal knowledge of one case in which a cure has resulted. This patient, a well-to-do woman, was under the care of Dr. Morrow of New York. She showed the pigmentary lesions of anesthetic leprosy. The Doctor informs me that he saw her within the last year and that all the skin lesions and the anesthesia had disappeared. She had had no recurrence after eight or ten years. That is the only case in which I have personal knowledge of a cure. I think in the anesthetic type the prognosis is much more favorable and a certain number of cases do get well, but they are usually badly deformed. In this particular case there seemed to be an absolute cure with little evidence of the disease having been present.

Dr. A. H. Ohmann-Dumesnil, in closing the discussion, said: Of course, we can all detail apparent cures. For instance, in the case of a woman from Mexico, a case of tuberculo-anesthetic leprosy, sensation was entirely gone all over the body. Under heavy doses of ichthyol internally, four grams three times a day, she had a well-pronounced ichthyolic fetor; in two weeks the tumors disappeared, and if I passed a fine hair over her neck she felt it. Unfortunately, she did not live long; in the St. Louis cyclone she fell dead of fright. I have been very unfortunate in not being able to follow cases for years. I have seen a cured (?) case of Unna's. In this pyrogallic acid was used for the tubercular lesions, and he gave her internal treatment with ichthyol. She improved some until she arrived in St. Louis, when she gradually got worse and worse and suddenly disappeared. So far as the cure is concerned, I found in these cases when I went deeply into the tissues I could find microbic changes indicative of the lepra process or the bacillus of Hansen. Until everything gives reactions and permits us to see that the tissues are all normal and the absence of specific bacteria is demonstrated, we can not say a case is cured. I am doubtful of the cure of a case of leprosy up to the present because we have had no opportunity of proving the matter definitely. Another thing, there is a question as to whether a supposed cure of leprosy is placed under conditions which will prevent a relapse. Is the patient so placed that there is no possibility of environment favoring a relapse? If the patient can be segregated for a number of years we can argue from that basis, but if other conditions are permitted to work, if there is the possibility of the original potential condition, it is difficult in order to secure proof of a cure to eliminate all the factors which may be potential in the development of the disease.

The Degenerate Thermometer.—Some physicians have been testing thermometers in common use in hospitals, and find them to vary in some cases as much as two and one-half degrees. In connection with the advertisements of cheap thermometers and of thermometers given as premiums, the warning is timely.

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*The paper appeared in The Journal, May 16, 1903.

least twice daily during the first week after birth. In the presence of a temperature an artificial feeding of a modified cow's milk is indicated; it can do no harm even if there be another cause present for the rise, but it will generally be sufficient to cause a satisfactory and permanent reduction.

There may be an ample supply of a good milk, but the absence of a serviceable nipple may prevent the child's obtaining it. I have often seen this, and it is now my routine practice to make as early an examination of the breasts and nipples of a pregnant woman as possible, especially in primipara, in order to give instructions in the massage of flat and depressed nipples. By massage and training a very serviceable nipple can be made from an unpromising one if the treatment is begun early enough. The wearing of tight corsets or clothing should be advised against during pregnancy, but especially in the presence of flat or depressed nipples. A careful inquiry should also be made of multipara in regard to their lactation history, as having a bearing on the possibility of nursing the new baby.

An infant's progress may be watched by noting its weight, the presence or absence of vomiting, the stools, the time and amount of crying, but the most important, perhaps, all else being equal, is the weight. A newborn baby loses in weight during the first week, but by the end of the second week, or sooner, it should have regained its birth weight, and after this it should gain not less than four ounces a week.

A stationary weight or a loss after the second week; vomiting, not simply a slight regurgitation; colic; continuous crying; diarrhea, with green, mucous movements containing curds, should be an indication for a close investigation of the breast milk, the frequency and time of nursing and the daily routine of the baby's life.

I have had very satisfactory results from the employment of Holt's milk test for the clinical examination of breast milk, and have had good results in modifying breast milk to meet indications as shown by this test taken in connection with the symptoms presented by the child.

A high percentage of proteids is evidenced by colic, crying, with a doubling up of the legs, tense abdomen, green, mucous stools containing curds. This very often occurs while the mother is lying-in, but as soon as she gets up and is enabled to take the proper exercise, the increased proportion of proteids is generally decreased. Should this relatively high percentage of proteids with low percentage of fat persist, and the plentiful supply keep up, much help can be had from pumping or milking out the fore milk from the breast, the child being allowed to nurse only the middle milk and strippings. Taking the child from the breast before it has finished nursing and giving it a small quantity of barley water, previously dextrinized, from a bottle, will often relieve the colic, lessen the diarrhea and make the curds smaller.

Too much fat, which I have met but a few times, causes vomiting and diarrhea, with few or no curds in the movements. If too much fat is present there may be found in the stools small round masses which resemble curds very much, but are smooth and soft and not so white as curds.

A too small milk supply calls for active treatment. It is evidenced by a stationary weight or a loss in the weight of the infant; crying within a few minutes after leaving the breast and sucking vigorously on its fists after nursing. If the deficiency in supply is the only fault, it may frequently be increased by such galactogogues as nutrolactis or somatose, free drinking of milk, cocoa or chocolate and the cereal gruels. Alcoholic beverages are to be avoided, as they encourage the secretion of a milk with a deficiency in its life-giving properties and an increase in the watery element. If this does not correct the difficulty, the child should be put on a modified cow's milk, of suitable formula, in addition to the nursing, giving at first one or two drams to an infant of four weeks immediately after a breast feeding, gradually increasing the amount as indicated. This will generally suffice to obtain a satisfactory report as to its weight.

Holt's plan of having weekly reports sent on specially printed cards is to be commended. This report, which includes the babies' weight, stools, sleep, etc., enables him to watch the progress of those babies under his care and to put the proper interpretation on abnormal movements, restlessness or no gain or a loss in weight. In this way many babies could be saved perhaps serious attacks of bowel or digestive trouble by an early notification of abnormalities. Mothers are too prone to attribute digestive disturbances to teething, which, if promptly attended to, might prove of little moment; neglected, they might result seriously or fatally.

With a good milk supply, regularity of nursing, infrequent or no night nursing, a child will generally do well; a good supply with a disregard of these requisites will result, perhaps, in serious digestive derangements. Should a combined breast and artificial feeding be necessary, the one or two night feedings should be breast milk, if for no other reason than the convenience to the parents. The only objection to this is the possibility of the mother falling asleep and allowing the child to lie with the nipple in its mouth for several hours at a time.

A condition which may give rise to serious digestive disturbances is nursing from a cracked or fissured nipple. The milk is mixed with blood drawn from the crack, which results in an indigestion, vomiting, etc. Indeed, a fissured nipple may be so intractable as to prevent maternal nursing entirely.

We would advise against maternal nursing in a tuberculous mother, or one the subject of a serious puerperal infection. A suppurating mastitis is not a contraindication to nursing, as it is an exception for the abscess to invade a milk duct. Regular nursing is an assistance rather than a detriment.

The problems, then, to be met in the supervision of breast feeding would be: 1. The increase of a too small supply. 2. Changing the character of the milk, (*a*) decreasing the proteids, (*b*) increasing the fat, (*c*) decreasing the fat. 3. To make serviceable nipples out of flat and depressed ones. 4. To supply an artificial or adjuvant food in case of a good but too small supply from the breast. 5. To continue nursing during a suppurating mastitis and retain the integrity of the gland after a subsidence of the inflammation.

The every-day problems of an entire artificial feeding are even more difficult of solution than those of breast feeding. It is not possible to have a set rule for guidance in all cases. Cow's milk for most cases is unquestionably best, but we frequently meet with cases in which no formula nor any method of home modification can be made to agree with the child.

It is my opinion that none of the artificial foods are suited for long administration to an infant. Sooner or later cow's milk must be given in some form to prevent the nutritional disorders which are certain to follow their long and exclusive administration.

In the choice of artificial foods, and no one food or one dilution or combination will agree with every child, those should be selected with which it is possible to combine milk in some proportion. Condensed milk in combination with some of the milk foods or a small percentage of cream can frequently be borne when other foods or combinations have failed. Without some such combination the results from an exclusive condensed milk feeding will be far from satisfactory. Condensed milk has much to commend it, it is one of the best foods for the poor and ignorant, is generally within their means, is easily kept sterile and is easily prepared. Its chief advantage lies in the small percentage of fat when the milk is diluted according to directions sufficiently to bring the percentage of proteids within the limits of digestion. Its long continuance results in such nutritional disorders as scorbutus and rachitis, and when the necessity arises for giving another milk it is difficult to change because of the taste acquired for the over-sweet condensed milk.

If a cow's milk is to be used, and it should be tried whenever possible, it is necessary for the physician to master the problems of percentage feeding and adopt some method of calculation of the prescription. There are a number of these by which very satisfactory results can be obtained at home.

He should be perfectly familiar with the supply of milk, its analysis, place and mode of production and process of handling, modification at home, care afterward, care of bottles and vessels used in the modification.

Minute and careful written instructions should be given regarding the feeding of an infant, and these should not be diverged from at all. Like the treatment of typhoid fever in a child, eternal vigilance is the price of success. Trust nothing to nature unaided.

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INFANT FEEDING.*

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Both our common humanity and our public economy demand that all preventable infantile mortality be speedily prevented. That many deaths are preventable by the successful employment of known methods of feeding is clearly proven. According to a noted English statistician the present mortality among infants of his country is as high as it was fifty years ago. This is probably too gloomy an aspect to take of the subject to do justice to the facts in the case. That this statement does not apply to the American people may at least afford a measure of personal gratification, but the demands of a still too large infant mortality on our profession are none the less urgent and perennial. These demands are made on the entire profession rather than on the pediatric specialist, for, while the latter stands forth more and more conspicuously the leader in thought and action, it is on the rank and file of the army, the general practitioners, that the hardest fighting inevitably falls.

It has been observed that the general practitioner, regarded from the view point of his labors, is the great pediatric specialist of his day, yet that in point of his knowledge, as a rule, he fails to deserve that distinction.

In the selection of a subject the writer chose "Infant Feeding" because of its important bearing on infant mortality. It is not the purpose to cover the subject, or even to take up in detail one or more phases of this subject, but rather to dwell on a few of the most salient points of the present interest with reference to recent progress and changes in the artificial feeding of infants.

It is interesting to note the growth of sentiment against artificial feeding, except as a final resort. The importance of allowing infants at least part breast feeding whenever this is possible, is now being emphasized more than ever. We are waking up to the fact that there is much erroneous belief in regard to the inability of mothers to suckle their offspring. These are capital evidences of progress. The beneficent influences of proper feeding on the infant, child and adult are a well-spring of life, and conversely, the pernicious effects of improper feeding on the tender little being as long as life continues are a relentless and irremediable source of disease. Such being the case, how befitting that at each annual convention much time is devoted to the consideration of this subject.

Progress in infant feeding heretofore has been lamentably slow, at times almost inconceivable, yet none the less positive and commendable. Unfortunately we learn much simply to be unlearned again by tedious deductions and eliminations. The importance we attached to artificial foods twenty years ago and that attached to condensed milk ten years ago are familiar examples.

The failure to rate morbidity second only to mortality in the estimation of food values in the feeding of infants is fruitful of incalculable evils. The laity judges of food value by two time-honored standards, one being negative and the other positive. The first is that the infant does not die, or conversely, "that it lives"; and the second that the infant thrives, or as commonly stated, "that it grows fat." The latter is always based on very superficial observation, and forms the kernel of the higher valued testimonials which manufacturers utilize in exploiting the virtues of artificial foods.

How easy the task for medical men to commit the same errors of judgment, adipose tissue being peculiarly deceptive in artificially fed infants. The mere fact that the infant lives and is growing fat easily makes an increasing morbidity which fatally exposes the infant to the first attack of one of the acute maladies.

The writer is not one to lay the death of every infant to the charge of the food employed in its behalf. The method of feeding may be alone at fault. Both over-feeding and under-feeding have their train of pernicious results properly classed as food disorders. These are frequently more or less obscure and generally but vaguely definable. Sterilized or pasteurized cow's milk and the various artificial foods of the market are fruitful sources of such results of improper food and faulty methods of feeding.

On the other hand, it must be admitted that many an apparently thrifty infant's death is in reality attributable to deeply-rooted results of improper nutrition.

This strictly modern subject of morbidity is receiving increasing attention. We have come to the time when methods to reduce mortality and methods to reduce morbidity must be considered side by side and conjointly. The American Pediatric Society did a noble work simply in calling specific attention of the medical world to this important subject about four years ago in a general inquiry into the prevalency of scurvy and rickets in artificially fed infants.

The tendency of to-day is to return to Nature's beneficent provisions and methods and to have more regard for the specific needs of the individual infant. We have learned to recognize in cow's milk Nature's abundant substitute for mother's milk. We want simplicity in food and method of preparation rather than complexity and artificiality.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

We are ready to abandon wholesaling and turn our best attention to individualization. Wholesale sterilization or pasteurization is not much advocated in this, the twentieth century. Laboratory milk is not so much heard of now in the foreground of pediatric teachings. Sterilized or pasteurized milk is first class in specific instances and to meet special indications, but falls short of being the best at our command for all infants and all conditions.

The relative value of recognized methods of feeding infants as esteemed by leading pediatric specialists at home and abroad, in the writer's estimation, may be summed up in the following order:

1. Exclusive breast nursing.
2. Mixed feeding, the infant having the advantage of more or less breast milk daily whenever and so long as this is possible.
3. Cow's milk modified in the home, water, lime water or a simple demulcent being employed as a diluent.
4. Dispensary and commercially pasteurized milk.
5. Boiled top milk variously diluted to suit the infant's needs.
6. Whole cow's milk modified by admixture of one of the artificial foods.
7. Condensed milk and the several cereal and milk foods.

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INFANT DIGESTIVE DISTURBANCES.*

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Infancy and childhood are the periods of life in which digestive disorders are most prevalent and fatal. In children of all ages a transient form may occur at any season, with a decided predilection, however, for the heated term. In midwinter occasional attacks of more or less severe, although usually transient, diarrhea without fatal tendency are seen. It is in the three summer months that enteric disorders, with diarrhea as a common symptom, are most fatal. This clinical fact is so well recognized, indeed, that the term summer diarrhea has gained a prominent place in the nosology of early life.

The mortality among infants and children during the summer months from digestive disorders exceeds that from all other diseases during the same period. Comparative statistics show that the greatest susceptibility to summer diarrhea is found between the ages of 6 to 18 months, during which time the death rate from this cause is manifold that seen at any other age. The well-known mother's dread of the second summer is a clinical recognition of this fact.

The death rate seems to divide this subject into two classes, viz., early infancy and late infancy. It is a common clinical observation that the persistency of digestive disturbance, due to the introduction of an irritant, diminishes with the age of the child after two years. So that with increasing age there is a steady diminution in the severity of diarrheal disorders and a corresponding decrease in mortality from this cause.

The first class includes infants during the milk-feeding period up to about the middle of the second year, while the second includes infants from 18 to 36 months. After the latter age, severe attacks of diarrhea are so infrequent as rarely to require the attendance of a physician.

In these disorders the onset is sometimes sudden, ushered in by a convulsion, vomiting and diarrhea. There is usually high temperature, thirst and nausea which make the infant clutch at food, but push it quickly aside as soon as a few mouthfuls have been swallowed. Restlessness is nearly always present. The stools may change suddenly, or there may be an interval of two or three days of preceding departure from the normal in frequency and character. There may be a great deal of colicky pain.

The infant, while apparently in perfect health, may develop vomiting, the matter ejected being at first the contents of the stomach little changed, highly acid, or densely curdled, to be followed soon, however, by a watery mucoid and sometimes by bile-stained fluid, less acid or even alkaline in reaction. Diarrhea frequently accompanies and invariably follows the onset of the disturbance. The first dejections may be nearly normal, but quickly change, showing evidence of fermentation and later of putrefaction, finally becoming serous. The odor of the stool varies from the normal acid to intensely fecal and later to a sickening, musty smell. The infant, apparently well nourished and playful, quickly shows signs of systemic disturbance in fretful, peevish irritability and restlessness, with head rocking, anxious facies, persistent whining cry, pyrexia, dry mouth, softened, flabby tissues and atonic musculature. The depressed fontanelle, sunken, lusterless eyes, sharply defined temporals, drawn features, with the intense thirst give evidence of the great drain of fluids. The abdomen, at first tympanitic, may soon become flabby and depressed, and the extremities may be cold, although the rectal temperature shows from 103 to 106 degrees. Convulsions may usher in the attack, follow the initial vomiting by a few hours, appear only at the final stage or occasionally may not develop. Within twenty-four hours from the onset, and frequently earlier, the algid stage is reached, with pallor and cold superficies, although the internal temperature may be high. The restlessness changes to a sopor accompanied by hyperesthesia and irritability when disturbed, but rapidly subsides into semi-coma, with shallow breathing, collapsed veins, pulseless radials, half-closed, filmy eyes and terminates in death by convulsion or asthenia.

This picture presents symptoms of acute poisoning from the gastro-enteric tract, occurring in a state of apparent perfect health, with fatal termination in from 24 to 48 hours. Although the well-nourished infant is not exempt from this form of acute intoxication, it occurs with so much greater frequency among those who show evidence of malnutrition that the latter condition may well be considered a predisposing cause.

Fortunately, cholera infantum, as just presented, with its almost invariable fatal termination, is by no means common. As to its frequency, it is extremely interesting to note the varying opinions of the most competent observers. One eminent observer of wide experience in diseases of children, stated recently in a public address that he had seen only three cases of undoubted cholera infantum. Other writers of equal eminence speak of its occurrence as more common and claim occasional success for certain therapeutic measures adopted in certain cases. These widely different opinions as to the frequency and fatality of cholera infantum may be reconciled only on the ground that we have no common standard for the diagnosis of this grave disorder. The prevailing opinion seems to be that so-called cholera infantum is extremely rare and almost invariably fatal, and against which no therapeutic procedure has thus far proved efficient.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

So far as antemortem clinical evidence goes, cholera infantum may be considered an intense form of acute gastroenteritis or a dyspeptic diarrhea plus some unknown intoxication.

Clinically, the line can not be sharply drawn between some cases of dyspeptic diarrhea and cholera infantum. It is within every clinician's experience that occasional cases presenting all the symptoms of so-called cholera infantum, from the sudden onset of vomiting to the serous diarrhea, seem to yield to treatment and ultimately recover. Who shall say that these were not cases of cholera infantum? Is there not a tendency to restrict that diagnosis to fatal cases only? Symptomatically the differentiation between the various forms of "summer complaint" can not be made. That bacteriology promises an early solution to some of these questions is believed by many, and the attention of the profession is turned with renewed interest to the special work of Booker, Flexner, Duval, Bassett and others in their investigation along this line.

The commonest form of summer diarrhea is so evidently the result of acute indigestion that some writers have classified it separately as the dyspeptic variety. This classification seems justifiable when we recall the frequent history of the ingestion of substances known to be inimical to normal digestion. In many other cases which give no record of dietetic error we are led to conclude by analogy of onset, symptoms and progress that perverted or disturbed digestion from causes not apparent may be responsible for a large proportion of summer diarrheas. It is the common experience of every physician to meet cases of sudden onset of vomiting and diarrhea, with temperature varying from slight elevation to a high degree of pyrexia, with or without *history* of improper feeding in which relief with absolute recovery follows the exhibition of one or more doses of castor oil and the withdrawal of food for 24 hours.

The diagnosis of diarrhea due to acute indigestion seems in the majority of cases to meet all the pathologic and therapeutic requirements. Unfortunately, however, in many instances, the simple treatment outlined above is not applied, or if applied, fails to secure the desired results, and the case develops a most obstinate form of gastrointestinal disturbance. There is continuation of pyrexia, with colicky pains, more or less flatulence, frequent dejections of foul, acid, greenish stools of varying consistency. The vomiting may cease, but the diarrhea persists with increasing tenesmus, the stools becoming mucoid, bloody or serous, and either fetid or odorless. From the common onset the resultant disorder may be named according to the area apparently most involved, as gastroenteritis, enterocolitis, ileocolitis or colitis with or without proctitis. It is amply in evidence that obstinate enteritis with or without anatomic change in the mucosa of the gut, or even membranous or ulcerative colitis, may be the last expression of an acute attack of indigestion in the infant.

The systemic disturbance which seems to be an expression of intoxication from the stomach and bowels varies widely as the disorder locates with greater or less intensity on this or that portion of the digestive tract. The early cessation of vomiting is frequently accompanied by the subsidence of pyrexia, with improvement in the general muscular tone. Apparently systemic disturbance diminishes proportionately with the distance from the stomach at which the burden of the disorder seems to fall. Thus, in most obstinate cases of colitis with extensive lesions of the mucosa, nutrition is frequently maintained to a remarkable degree, the child showing but little evidence of systemic intoxication, whereas a much less obstinate disorder of the small intestine may cause prostration with symptoms of general infection. *In other words, the more* active the digestive area involved the more profound the constitutional disturbance and the greater the tendency to prostration and collapse.

Of the complications of summer diarrhea, the most common in young infants is stomatitis from simple catarrhal to the obstinate ulcerative variety. It becomes serious as it interferes with the ingestion of food and increases the restlessness and discomfort. Its persistency adds to the gravity of the prognosis. This complication is most often seen where the gastric disturbance is marked, and its improvement is usually in direct ratio with the improvement in stomach digestion.

Cough and rapid respiration, so frequently seen in acute or subacute gastroenteric disorders, is usually indicative of broncho-pneumonia, which may or may not yield marked physical signs. That it selects the most dependent portion of the lung adds to this infection the dangers of mechanical hypostasis.

The quite frequent occurrence of albuminuria in patients with summer diarrhea has led some observers to attribute the convulsions to uremia and the occasional so-called idiopathic edema to nephritis. The conclusions, however, are rarely confirmed by the postmortem findings. Functional cardiovascular conditions with the anemia rapidly induced by the colliquative discharges appear a rational explanation for many of the cerebral phenomena and the edemas of dependent parts.

*Lesions of the integument, from mere dryness or or*dinary intertrigo to the various forms of urticaria, furunculosis and local necrosis, are met with most frequently in the subacute and chronic diarrheal disorders. Whatever the local treatment applied they yield only to the improved nutrition of convalescence.

A prolonged digestive disturbance rarely leaves the infant free from evidences of retarded development, which in many instances is never fully compensated. The picture of a two-year-old set back to the plane of a yearling, both as to digestive and motor functions, is a familiar one, and the attempt to adapt his hygiene to age instead of to condition is a common error.

Perhaps the most important effect of severe summer complaint on the survivors is the feeble resistance to infection from lowered vitality, so that the danger from intercurrent diseases is manifold. The special hygiene for these little convalescents is a subject too frequently dismissed with the doctor at the conclusion of the enteric disorder.

It is safe to say that the fatalities of summer diarrheas are seen very rarely among the exclusively breastfed infants. They may starve to death from insufficient or impoverished breast milk, or dying from inherited dyscrasiæ they may show some of the symptoms of chronic indigestion. They may exhibit symptoms of acute or subacute digestive disturbance as a result of palpable errors in hygiene or they may be destroyed by some overwhelming intoxication, presumably due to sudden changes in the constitution of the breast milk, resultant from physical or mental disturbance in the nurse. In none of these instances is the symptom diarrhea essentially a summer diarrhea. Moreover, it is a common observation that the diarrheas of the exclusively breast-fed are usually tractable, regardless of season, in otherwise healthy infants, by the application of the well-known principles of hygiene.

The startling mortality from digestive disorders is confined almost entirely to bottle-fed babies. This fact is so generally established that when pronounced diarrheal symptoms appear in an infant at the breast the first interrogations are directed towards the possibility of the ingestion of other material than breast milk. A careful study of the infant's hygiene, with examination of the dejecta after colonic flushings, frequently disproves the statement that the child's diet included nothing but breast milk. Statistics show that in the fatal cases of summer diarrhea less than 3 per cent. were exclusively breast fed. No clinical phase of this subject begins to rival in importance this one fact, that summer diarrhea, with rare exceptions, means practically summer artificial feeding.

In view of our knowledge of summer diarrhea the question of feeding, then, is of paramount importance. A neglect to use every means to secure for the infant natural food can not be atoned for by the most energetic therapy yet devised. Many of the obstacles to natural feeding are insuperable or even formidable only so long as the lay mind is asleep to the fact that his physician knows how to prevent fatal digestive disorders in the infant. When the responsibility for the consignment of a baby to a method of feeding that diminishes his chances of living two-fold more than inoculation with smallpox virus is fully brought home to the physician the difficulties of breast feeding will become proportionately insignificant. The fact that some governments and municipalities now require on the infant's death certificate a statement as to the method of feeding shows an awakening to the importance of this matter. How long before the same line of inquiry shall require an explanation as to why the infant was subjected to the manifold dangers of artificial feeding?

It has long been claimed, partly from inference and latterly as a result of milk examinations, that breast milk is not constant in its composition, but varies normally, not only in the total amount of solids, but also in their relative percentages. The admirable work of many milk analysts, especially that of the Adriances, shows some of these variations in solids during the entire period of lactation in quite a large number of recorded cases. So far as I can learn, however, no extensive record has been kept as to the influences of season on the various constituents of the mammary secretion. From my own observation I am confident that careful work will show diminution in the solids of high caloric value during the hottest weather.

A fact which admits of no discussion is this, that dietetic changes to meet the varying thermic conditions of climate and season are essential to normal metabolism in older children. Under what age this physiologic law is inoperative the most exacting artificial percentage feeders have neglected to state. Beginning with as low solids in their synthetic imitation of mother's milk as will sustain life, the rule is to increase gradually all the solids until an approximation of breast milk percentage is attained—the advancing age of the infant requiring a daily increase in the total quantity ingested. Whether from May to September or from October to January, whether in Florida or in Manitoba, the artificial emulsion must be pushed with increasing age. The sweltering infant's cry of thirst is inexorably met with the bottled emulsion of higher proteids and hydrocarbons until the overtaxed digestion suddenly fails. Fermentation and putrefaction follow with acute intoxication and much speculation as to the etiologic rôle played by the organism of Shiga.

Under such dietary regimen of unnatural foods, unnaturally administered, we cease to wonder at the high death rate of bottle-fed babies in hot weather.

When a tithe of the work that has been expended to cheat the babe and mother out of their mutual rights by the substitution of artificial methods of feeding, shall have been devoted to the problem of lactation, its physiology and its pathology, then will the morbidity and mortality of the suckling cease to be the opprobrium of the medical profession and the Shiga bacillus, with its pathogenic congeners, may be relegated to the background.

SUGGESTIONS FOR REDUCING THE PREVALENCE OF SUMMER DIARRHEA IN INFANTS.*

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Summer diarrhea is caused by the entrance into the system, usually through some food medium, of a virulent poison, which is the product of micro-organisms.

The symptoms in a given number of cases of summer diarrhea will vary enough to enable one to recognize, aside from degrees, several forms of the disorder.

The nature of the infection—whether it was poisonous products already formed outside the body or whether it was bacteria as such that entered the gastro-intestinal tract—has been offered in explanation of this variation in symptoms. But since, thus far, there has been no single form of bacteria separated as being specifically responsible, it is possible that the nature of the organism itself has something to do with shaping symptoms.

However, what uncertainty exists as to the cause of the several forms of the disease does not make less absolute the conviction in the minds of bacteriologists that summer diarrhea is the result of bacterial infection and that whatever other factors are concerned are not causes *per se*, but are only conditions most favorable to the development of the bacteria and to the production of their poisons.

It was by accepting this view that Kerley[1] was able to prove so brilliantly the curable nature of the disease.

But summer diarrhea is better than curable—it is preventable. If a child is fed on a food containing neither poison nor organisms capable of producing poison that child will not be poisoned!

We witness, however, an annual recurrence of this disorder and in such prevalence as to show that we have thus far accomplished but little in the way of prevention. This unsatisfactory result is easily accountable.

First, because there is a large percentage of practitioners still believing that heat and humidity alone and without the presence of a single bacterium are capable of producing the disease.[2] This view precludes any acceptance of its preventable nature. Consequently, a large percentage of the medical body has shown no inclination to co-operate with those especially interested in carrying out prophylactic measures.

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[1] Kerley: "Treatment of Summer Diarrhea in Infants." New York Medical News, Aug. 4, 1900.

[2] Editorial: "Summer Diarrheas in Children." THE JOURNAL A. M. A., July 4, 1902.

Beside, there is involved in the subject of prophylaxis itself a complexity and a multiplicity of questions that have been discouraging to the accomplishment of appreciable results. Once we undertake to force the right of every child to receive nothing but a clean unpoisoned food we find ourselves entangled "in embarrassing questions of home sanitation and of personal hygiene and in graver questions of state medicine and of public charities."

Another factor, which has offset any results in the way of general prophylaxis, is found in the increase in the number of children being artificially fed. The artificial foods are the ones most likely to be contaminated and the artificially-fed infant offers the least resistance to bacterial poisoning.

Realizing, then, the main difficulties confronting us, can we overcome them?

Since the whole question, complex as it may seem, resolves itself into one of education, it seems to the writer that these disorders ought no longer to be accepted as inevitable.

The persistent pushing of the infectious nature of summer diarrhea at every available opportunity by every member of the profession who believes in it, and especially by every member of this Section who believes in it, will soon have the profession at large educated up to the point of acceptance. Let the bacterial origin of the disease be taught in our schools, stressed in our societies and our journals, and there will soon be found as few retaining the old ideas relative to the cause of summer diarrhea as there are now still holding to the old ideas of the cause of puerperal septicemia.

MODE OF ENTRANCE OF BACTERIA.

The food of the ordinary infant is milk. Unfortunately milk is one of the happiest of media for bacteria. Breast milk is not infrequently contaminated through careless and uncleanly habits of the mother. Therefore, we find that summer diarrheas are not confined entirely to bottle-fed babies. But owing to carelessness in dairy methods, in its transportation and in its handling, cow's milk is much more apt to be contaminated with enough of adventitious matter to make it swarm with microorganisms. Notwithstanding, I meet doctors prescribing milk formulæ who do not even take the trouble to ascertain the name of the dairy furnishing the milk from which their formulæ are to be made. In a community above the average in the intelligence of its medical men, I find the utmost indifference as regards the milk supply. To a large body of the profession milk is milk. Our duty here is clear, namely, to teach these men that some milk is milk and that some milk is—poison!

PERSONAL INSPECTIONS OF DAIRIES.

The result of this teaching will be more general inspections and investigations of dairies by physicians. The physician, who possesses any degree of progressiveness or any regard for the welfare of his patients, will come to appreciate the advantage of being able to recommend dairies which are reasonably certain to supply clean milk. This is a commercial age, and dairymen, without being necessarily dishonest, are governed by commercial motives. There can be no greater stimulus for getting dairymen to exercise care and thought in an endeavor to supply an uncontaminated milk of good quality than the knowledge that what they give will be known and that their prices and patronage will be governed somewhat by the quality of milk furnished.

MILK COMMISSIONS.

Even should there exist among medical men a widespread desire to raise the milk standard, except for those physicians living in towns where the milk is furnished directly to the consumer by the dairyman, the visiting of dairies and the inspection of conditions thereon would be found to be impossible. In large cities milk is furnished by dealers after it has been collected from many farms and from varying distances. For the individual physician to inspect the source of such a supply is clearly impractical. This difficulty has already been partly met in some few cities by the establishment of what are known as milk commissions.

The objects, methods and personnel of such a commission, briefly stated, are about as follows:

The commission assumes the responsibility of ascertaining and of recommending dairies and dealers which can be depended on to furnish clean milk. On request, any dairyman or dealer is furnished with explicit instructions as to how he may bring his dairy or depot and its product up to the requirements of the standard set by the commission. Should he become a candidate for the certificate of recommendation furnished by the commission, his farm in the one case or his milk depot with its source of supply in the other, is inspected and the certificate granted or refused, according to the findings. Any certified dairy is open to as many inspections and without previous notice, as the commission may see fit to make. The commission withholds the right to withdraw any certificate issued.

Beside members, whose duties are purely executive or clerical, the commission is usually composed of four experts: (1) A veterinarian, who examines the cattle and all matters pertaining to their health, care and management; (2) a physician, who examines all persons connected with the dairy in relation to their habits of cleanliness as well as for transmissible diseases; (3) a bacteriologist, who examines the milk to test the efficiency of the measures in force for excluding bacteria, and (4) a chemist, who examines the milk as to its composition and for adulteration.[3]

WHERE MILK COMMISSIONS HAVE FAILED.

These commissions have accomplished enough to prove their practicability and to encourage those interested to further endeavor, but their results have not been in proportion to the unselfish efforts that have been expended. This disappointing feature is due to a lack of appreciation and of co-operation on the part of the general profession. The men interested in such commissions are too often regarded as enthusiastic cranks possessed of a hobby! They even fail to gain the undivided support of those directly concerned with the question of infant feeding. A partial canvass by the writer of the nurseries and babies' hospitals in one of the cities having a milk commission, resulted in the finding that not a few of these institutions were employing milk other than that recommended by the commission.

I believe this failure of the profession at large to take early advantage of the benefits offered by the milk commission to be due in part to the sectional workings of the medical societies of large cities. It is only the most energetic and progressive man in such societies who is

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[3] For fuller description of milk commissions see reprint from seventeenth annual report of Bureau of Animal Industry (1900), entitled "Market Milk: A Plan for Its Improvement," by R. A. Pearson, M.S. I have made free use of Mr. Pearson's description in this article.

THE WEIGHT WAVE OF MENSTRUATION.

A PRELIMINARY NOTE.

WM. T. BELFIELD, M.D.
CHICAGO.

The record of the daily weight of four healthy, unmarried women between 22 and 29 years of age, and of average menstrual regularity, during a total of twenty-three menstrual periods, discloses a phenomenon which I have termed the weight wave of menstruation. This comprises the following features:

1. During several days, especially the first, preceding the menstrual flow, there occurs a progressive increase in the weight of a healthy young woman, often comprising—especially in winter—from two and one-half to five pounds, which may be from 1½ to 5 per cent. of her usual weight. The climax of this gain is immediately followed by the rapid loss of a large part, perhaps half, of this increase in weight (often within eight to sixteen hours) and then a more gradual loss of the remainder, extending over several days (Fig. 1).

FIG. 1

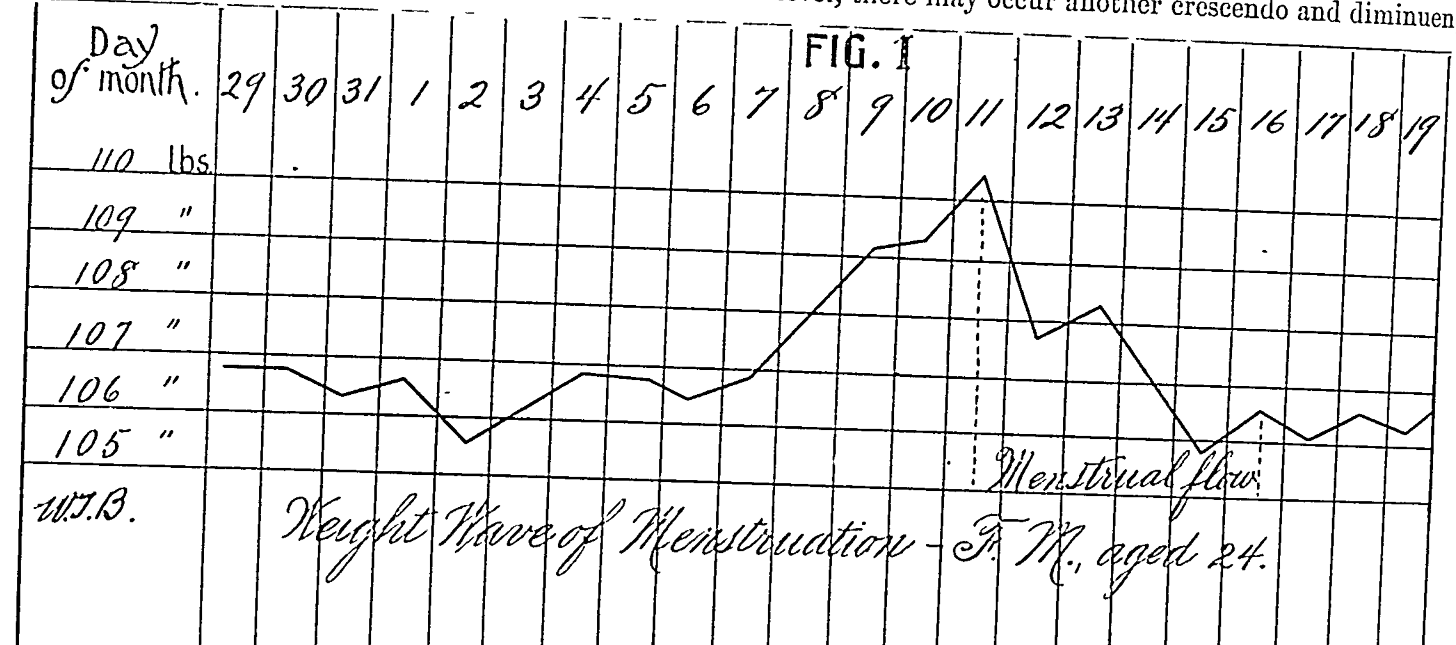
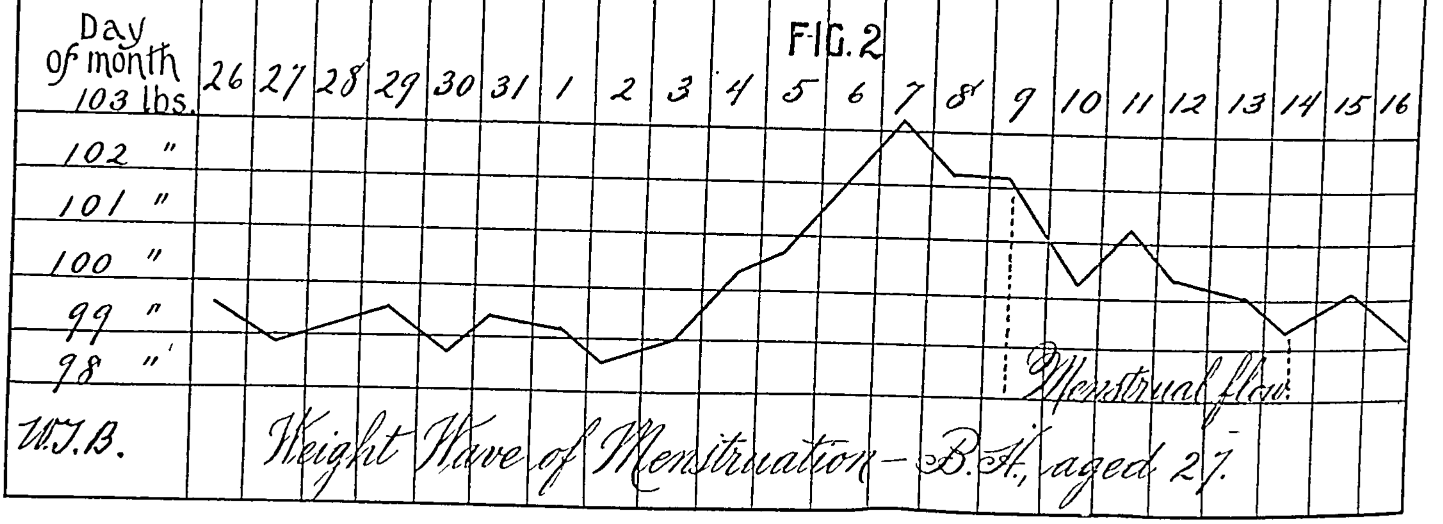


FIG. 2



2. The menstrual flow begins during the rapid loss of weight mentioned, the appearance of the blood often, though not always, following immediately on the crest of the wave. The flow continues with the less rapid loss of weight during the next few days, terminating about when the woman's weight regains its pre-menstrual level (Figs. 1 and 2).

3. The pre-menstrual gain in weight is due, not to increased ingestion of food, but to diminished excretion, especially of water. The rapid loss of weight following the crest of the wave is due, not to abstinence from food (nor, of course, to the trifling loss of menstrual blood), but to rapid excretion, notably of carbon dioxid and water. Thus I have seen a woman lose two and one-half pounds in weight during the five hours following the appearance of the menstrual flow, though neither urine nor feces had been voided during that period, and though the subject had had no exercise other than that incidental to clerical office work. (Her loss of weight during the same period, between menstruations, averaged less than one-half pound.)

4. The appearance of the menstrual blood does not always coincide with the beginning of loss in weight; the flow may begin before or, more often, after the loss of weight becomes distinct (Fig. 2).

5. After the weight has sunk to its pre-menstrual level, there may occur another crescendo and diminuendo movement, lasting several days, but less pronounced and typical than the menstrual wave. Hereafter the weight shows no constant variation until there occurs a sudden, transient loss, which is the frequent forerunner of the next menstrual wave.

6. A girl of 14 and a woman of 23, both of irregular menstrual habit, exhibited the menstrual weight wave on several occasions when the flow was nearly or quite lacking.

7. A woman of 59, who had not menstruated for twelve years, showed no weight wave characteristic of the menstrual period in young women.

8. For two days preceding the climax in weight there is often marked torpidity of the bowels and scantiness of urine; while, with the decline in weight, excretion

by bowels and kidneys, as well as by skin and lungs, is notably increased.

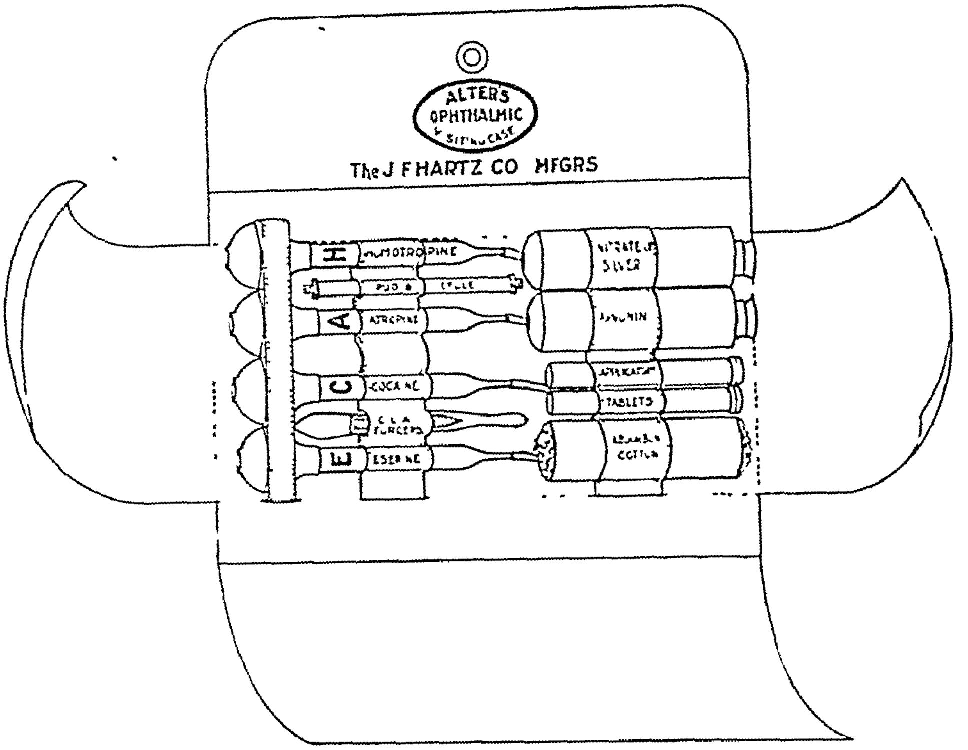
9. The temperature curve is not constant; there is usually a rise of about 1 F. during the increase in weight and a sudden fall after the crest of the weight wave is passed.

New Instruments.

A NEW OPHTHALMIC VISITING CASE.

FRANCIS W. ALTER, M.D.
TOLEDO, OHIO

This little visiting case which I present to the profession and which is herein portrayed is of especial interest to oculists; it can of course, be used by the physician in general work in connection with his ophthalmic cases.



As will be seen by the cut, it contains all the essentials commonly used in the treatment of eye cases, each dropper being marked in a manner indicating its contents.

The case contains cocain, atropin, eserin, homatropin, two bottles of silver nitrate in different strengths, a phial for toothpicks and a reservoir for cotton, beside a bottle intended to hold a relaxing tablet, a spud and a pair of epilating forceps, a pocket in the side of the case for prescription blanks, cards, etc. While the case is primarily intended as a visiting case it serves all purposes for office work.

338 Summit Street.

A POCKET STERILIZER AND INSTRUMENT CASE

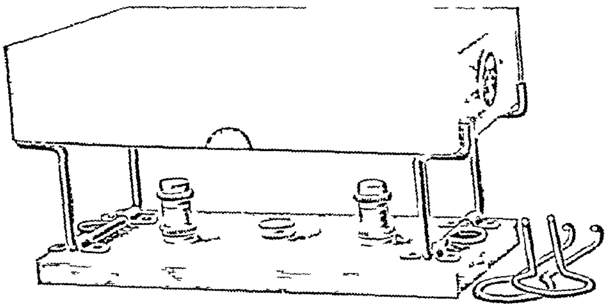
W. P. HERRICK, M.A., M.D.
NEW YORK.

The object in devising this case was to do for minor and emergency surgery what the compressed tablet has done for minor and emergency medicine. When closed and packed the case measures 7x3½x1½ inches or 17.5x8.5x4 cm., thus being easily portable in the breast pocket or emergency bag.

A telescope cover (see cut) gives an extra sterilized tray for instruments after boiling. The box itself being the boiling tray, both of these are manipulated, when hot, by the handles, the boiling tray by holes in its upper edge on either end, the cover by its edges, and the instrument tray proper by its wire handles. Thus we have a sterile field, with three trays, produced in one boiling.

As an instrument case, the instruments are packed in the instrument tray, held in place to prevent rattling or damage by spring crossbars caught in perforations of the tray on either side. This I believe is a new feature and thus the instruments are easily placed in the tray, the spring clips holding them, whether more or less are carried, as individual selection dictates. The instruments are all of standard size, a considerable convenience in operating not possessed by many pocket instrument cases. This selection approximates the usual hospital routine as follows: dissecting forceps, probe, small curved scissors and Kocker clamp, scalpel, artery clamp, Abbe needle holder, spool of silk and needles carried in a small needle box which also holds the sodium carbonate for boiling, Volkman spoon, director with aneurism needle handle and curved bistoury. If needed, the Kocker clamp and Abbe needle holder may be used with the artery clamp for hemostasis, thus giving three clamps, and for blunt extraction the aneurism needle and tray handles may be used. For minor and emergency surgery the above should be amply sufficient.

The essential part of the sterilizer is the double wick alcohol lamp, measuring 6½x3¼x½ inches, or 16.5x8.25x1.2 cm., having a capacity of about 80 c.c., a little less than three fluid ounces of alcohol, and thus can burn several hours steadily. When the boiling tray is half full of cold water, the usual amount, the boiling time is ten minutes. This will not be found excessive, however, as after lighting the lamp the preparation of the patient and sterilization of the hands will fully occupy it. With hot water the time is, of course, reduced proportionately, or the boiling tray may be placed on a gas stove or range, as in an ordinary sterilizer, should this be desirable. The wicks are covered by screw caps, as is the filler and vent when not in use, and folding legs support the boiling tray, which is kept from being knocked off in any way by the holders.



There are many other convenient surgical uses to which this case can be put, as in catheterization, or in clinic dressings; having continuously boiling water at your hand the instruments may be dipped as one passes from case to case, while with slight modifications of size or shape it would be all sufficient for many other surgical manipulations or operations of several of the specialties. Its cost will not exceed $6.75, exclusive of instruments, which is no more, I believe, than any first class ordinary metal pocket case would cost.

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IONS AND ELECTRONS.

Among the new words emerging from the laboratories of physics and chemistry which are finding their way into articles on medical subjects are "ion" and "electron." The word "ion" is already well launched medically; the word "electron," though but seldom met with as yet in contributions to the medical press, is destined to occupy, sooner or later, a very prominent place in medical writing. It seems worth while, therefore, to try to make the meanings of these words clear in order that those of our readers not quite at home with them may have less difficulty in understanding the articles in which they may chance to be used.

Bearing firmly in mind the conceptions of atoms and molecules gained in our chemical studies of the past, it is not difficult to pass on to the idea which the term *ion* has been adopted to express. After the establishment of the molecular theory, chemists soon made observations which led them to believe that they had to deal with particles which, on the one hand, were different from molecules and, on the other hand, possessed properties not pertaining ordinarily to atoms. It had been known for a long time that aqueous solutions of some chemical substances (e. g., sodium chlorid, hydrochloric acid, potassium hydrate) will conduct electricity, while those of others (e. g., sugar) will not. The substances, aqueous solutions of which will conduct, are called electrolytes. They are altered by the passage of the current, decomposing on electrolysis into certain constituents which become separated, one going to one electrode, the other to the other. Faraday showed that when a current of electricity acted on solutions of different salts, equivalent quantities of the metals are deposited by the same current in the same time. All inorganic salts are electrolytes, as are acids and bases. The hydrogen of acids always becomes separated at the negative electrode, as do the metals of salts, while the rest of the acid-molecule or salt-molecule becomes separated at the positive electrode. It was thought, at first, that the passage of the electric current determined the decomposition of the dissolved substance, though Clausius (1857) assumed that some of the molecules of an electrolyte are dissociated into their ions (kation and anion), and that these move independently of one another. The part of the dissolved substance that goes to the negative electrode was called the *kation,* while the part that goes to the positive electrode was called the *anion.*

The Dutch chemist, van t' Hoff, a little more than fifteen years ago, drew attention to the relation between dilute aqueous solutions and gases. Pursuing his studies further, he was able, in 1895, to apply Avogadro's law for gases to solutions and to make it almost certain that solutions having the same osmotic pressure, at the same temperature, contain the same number of molecules. But just as certain vapors, like ammonium chlorid, exert a greater pressure than would be expected according to Avogadro's law, so van t' Hoff found that certain substances in aqueous solution similarly "disobeyed" the law; these "irregular" substances are all electrolytes, non-electrolytes are "regular."

An explanation of the exceptions to Avogadro's law for gases like ammonium chlorid had been found in the suggestion that some of the molecules break up into a molecule of ammonia and one of hydrochloric acid; such a dissociation would cause an abnormally large gas pressure. Then came the epoch-marking paper of the Swedish physicist, Svante Arrhenius, in which the theory was advanced that in solutions of electrolytes the abnormally high osmotic pressure is due, not to a breaking down of molecules into smaller molecules as in the case of ammonium chlorid vapor, but to the dissociation of molecules into *ions,* each ion being an atom, or a group of atoms, charged with electricity. Thus, according to Arrhenius, in dilute aqueous solutions potassium chlorid is dissociated into potassium ions (kations) and chlorin ions (anions). The ion is entirely different from a molecule or a neutral atom; it carries an electric charge. The degree of dissociation in a solution can be quantitatively measured by establishing its electrical conductibility. In a concentrated solution of potassium chlorid there is but little dissociation; the substance is present in the water chiefly as KCl molecules and there are but few ions. In a very dilute solution the dissociation is great; there are few KCl molecules present, but an enormous number of ions. Dry copper sulphate is white or about colorless, for its molecules are colorless; dissolve it in water and the solution is blue, for copper ions are blue. Sugar does not become dissociated (ionized) when it is dissolved in water; hence solutions of sugar do not conduct electricity.

Again, when a substance is dissolved in water, the freezing point of the solvent is lowered. Certain substances had been found by Raoult to cause abnormally great depressions of the freezing point, and it turned out that they were the same substances which yield abnormally high osmotic pressures. The theory of Arrhenius of electrolytic dissociations explains these abnormalities wholly satisfactorily, as well as certain other abnormalities of the lowering of vapor tension of solvents, which need not be gone into here.

The development of the ionic theory has made many old facts turn new faces to us. The vast majority of chemical reactions prove to be reactions between ions, not between molecules. When HCl is neutralized with $NaOH$, the molecules are first dissociated into their ions and the reaction consists in the union of the hydroxyl ion of the base with the hydrogen ion of the acid to form water, the sodium and chlorin ions remaining as ions in a dilute solution of sodium chlorid. The effect of salt solutions on the heart muscle seems to be due entirely to the action of the sodium ion, the chlorin ion being inert.

But chemists and physicists had still a step further to go, and the step has turned out to be a great leap. Investigators began to ask "What is the explanation of the electric charge on an atom which makes an ion so different from a neutral atom or a molecule?" Illumination came in an unexpected way. Years ago Sir William Crookes suggested that the kathode rays in vacuum tubes represent matter in a "fourth state," neither solid, liquid or gaseous. He was smiled at and almost jeered at for a while, but it seems he was right. The researches of J. J. Thomson and others have shown that the matter thrown off as kathode rays, and causing x-rays or phosphorescence where they strike, consists of fragments much smaller than atoms, of ultra-atomic corpuscles of which the chemist's atoms seem to be composed. The lightest atom hitherto known is the atom of hydrogen, but the atom of hydrogen weighs 1,870 times as much as one of these corpuscles. Moreover, no matter what their source is, these ultimate corpuscles appear to be identical. The name *electron* had been given to the electric charge on an ion by Dr Johnstone Stoney, it is now believed by many that the difference between an ion and a neutral atom lies in the presence or absence on the atom of one of these ultimate corpuscles of Thomson, so that the name *electron* is now applied to the corpuscle. To some of the wonderful properties of these extremely minute electrons we expect to call attention in a subsequent number.

THE TRYPANOSOMA DISEASES

That some controversy has taken place concerning the priority of the discovery of the trypanosome as a pathogenic blood-infesting organism in man, denotes a well-grounded suspicion that this flagellate protozoon and the disease it produces, trypanosomiasis, may in the course of time occupy an important position among the infectious diseases common to man and the lower animals. In veterinary science the trypanosome has long been known as a potent agent of disease causing ravages of great economic consequence among cattle, horses and other domestic animals. In different countries the disease has received names more or less colloquial, and it does not appear to be definitely settled which of these may be due to identical or different trypanosomes. The nagana of Central Africa and the Transvaal is believed by Laveran and Mesnil[1] to be caused by the same organism as the mal de caderas of South America, although this requires further study for confirmation.[2] Koch, Nocard and others have expressed the belief that the trypanosomes of nagana and surra, the designation the disease has received in the Orient, are also identical. Theiler has recently reported a new trypanosome affecting cattle of the Transvaal which, unlike that of nagana, is non-pathogenic for other mammals; it also possesses differences of size and structure.[3] The discovery by Dutton of trypanosomiasis in man in the instance of an English government official and the report by Manson[4] and Maxwell-Adams[5] of other similar cases furnishes a forcible illustration of the valuable information to be derived from a study of tropical diseases."

It is generally believed that in animals the disease is communicated by the bites of insects, nagana being widely known as the tsetse-fly disease, in dourine, the trypanosoma disease of cattle in Algeria, the adjacent European countries and Turkey, coitus furnishes the means of transmission of the disease from one animal to another and the first lesions appear on the genitals. The case of human trypanosomiasis reported by Manson, a woman and one of the European colony of the Congo region, experienced the first symptoms two or three days after an insect bite on the foot. Trypanosomiasis in animals is characterized by common symptoms, notwithstanding variations in the genus of the protozoa. A profound anemia, edema of the dependent parts, progressive paralysis and disturbances of vision are accompanied by remittent or intermittent fever. Horses and other equines in which the disease has been produced experimentally have died in from a week to a few months; in the Argentine Republic a chronic form of trypanosomiasis has been known under a distinct name, "baacy-poy." The organisms have not been found in the blood of animals ill from baacy-poy, yet such blood injected into healthy animals produces the acute form or mal de caderas. In Manson's case referred to above there was a periodic apyrexia of seven days interrupting a fever lasting three days; accompanying the fever an erythematous eruption developed on the face and trunk.

At the recent session in New Orleans, F. G. Novy demonstrated before the Section on Pathology and Physiology pure cultures of the common trypanosome of rats which had been grown on rabbits' blood serum mixed with agar. The growth occurs in the water of condensation and not on the surface of the medium, as in the case of bacterial growths. The experimental cultivation of an animal parasite on artificial media as a pure culture has not been heretofore accomplished, and great credit is due Novy and his assistant, W. J. McNeal, for the introduction of technical methods affording greater opportunities of studying these parasites.

The points of similarity between trypanosomiasis and malaria in the occurrence of protozoan parasites in the blood producing a destruction of the red corpuscles suggest the application of similar methods of cultivation to the plasmodium. The results of careful, thorough study of an epidemic among rats at Ann Arbor and the discovery of allied parasites in man through researches in tropical diseases, it may be seen from the foregoing, are closely related developments of science and we may confidently expect that the next step, dealing with the prevention of the disease, will soon be taken. It matters little whether horses or rats be first successfully immunized, although the former accomplishment would confer a great benefit, since in horses trypanosomiasis is invariably fatal; the importance of immunization against diseases caused by trypanosoma, in its possible application to similar therapeutic measures in malaria, is at once evident. There are also other possibilities connected with studies of the evolution and development of the parasite, since light may be thrown on the etiology of other infectious maladies, the protozoan character of which has been suspected.

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[1] Annales de l'Institut Pasteur 1902 xvi, 26

[2] See the report by Elmassian and Migone ibid, 1903, April, 243

[3] Compt Rend de l'Acad des Sciences, 1902, cxxxiv, 512.

[4] Brit Med Journ, 1903, i, 720

[5] Ibid, p 721

[6] The Journal A M A, xl, 784.

PRESENT STATUS OF TYPHOID FEVER.

The Widal test has narrowed the bounds of typhoid fever very slightly in one direction, but has greatly extended them in many others. Certain febrile affections that run a symptomatic course, absolutely impossible of differentiation from typhoid fever by any clinical observation, however expert, which occur in epidemic form, have rose spots and a continued fever of self-limited duration, and with a tendency to hemorrhage from mucous membrane and enlargement of the spleen, with well-marked liability to relapses that repeat the previous stages of the disease—in a word, exhibit all of the group of symptoms supposedly pathognomonic of typhoid fever now known to be due not to the bacillus of Eberth, but to certain of the bacilli of the colon group. It is agreed that these are not true typhoid, but paratyphoid fever. How wide the limits of this new affection may be is not yet definitely known, but it is generally conceded not to be very common. Its true distribution remains to be decided by actual observation rather than by theoretic considerations. For instance, the very interesting question is now on the tapis whether in certain parts of the south, owing to climatic influences, paratyphoid fever may not be much more frequent than elsewhere, since certain recent observations point in this direction, and because the south has always presented some anomalous types of continued fever not easily reconcilable with the ordinarily accepted type of typhoid fever.

On the other hand, the Widal test has demonstrated with absolute assurance that a number of affections hitherto called by other names are really cases of typhoid. There is scarcely a part of the country that did not have a special continued fever, supposed to be characteristic to itself alone. This was often given a special name, such as mountain fever in the west, so-called camp fever in the east, typho-malarial fever in the south. According to the Widal test, mountain fever is undoubtedly true typhoid. The assumption of a typho-malarial fever in the south, supposed to be an intermediate between typhoid and malaria, has been abandoned. The so-called camp fevers of lumber regions and of military encampments are no longer considered independent entities. Obscure malaria at the north is now acknowledged to be, in most cases, sporadic typhoid fever. The country places, according to the statistics of the last United States census, are not spared any more than are the cities, so that all practitioners must be constantly on the look out for it. It is especially at the extremes of life that, according to the revelations of the Widal test, typhoid fever has proven to be much more common than was hitherto suspected. Even advanced age is no protection against the invasion of the typhoid bacillus, in spite of the atrophy of the lymphatic structures of the intestine, through which the bacillus usually finds its port of entry. A patient's age is no longer considered a diagnostic element for the exclusion of typhoid fever, since typhoid without intestinal lesions is not uncommon, and the Widal test has proven its occurrence even after 70. At the other extreme of life, even nursing infants may contract the disease from infected water given them between nursings.[1] In cities where typhoid fever rages with special virulence, continued fever in children is as likely to be typhoid as in their adult relatives.

In any part of the country and in patients of any ag it is safest for the practitioner to assume, in case o doubt, that a continued fever is typhoid until it is prove to be something else. When continued fever present anomalous symptoms that apparently preclude the diagnosis of typhoid fever, it should be remembered tha the occurrence of other typhoid cases in the neighborhood make the best possible pathognomonic indication in doubtful cases. The epidemiologic rule that when an epidemic exists cases should be considered to come under this head until they can be absolutely proved to be something else, remains the most helpful aid for safe diagnosis. The frank immediate declaration of the existence of typhoid constitutes the best safeguard against the spread of the disease and at once arouses interest as to its possible source, thus initiating effective prophylaxis.

THE FOURTH OF JULY TETANUS EPIDEMIC.

In a short time we shall witness the annual slaughter of the innocents. On the morning of July 5 there will be few communities that will not find recorded in the local paper an account of the sacrifice of some life to the celebration of the day before. The bursting cannon, the premature explosion, the burning building, the bulleted cartridge that was supposed to be a blank, will each claim its quota of victims, not to mention the lost eyes and fingers, the burns and injuries beyond number. Were this all, the record would be bad enough, but after the excitement is over, the glory of the day half forgotten, there will begin to appear scatteringly and, therefore, less prominently, accounts of the children who have succumbed after hours or days of suffering to the tetanus-infected blank cartridge wound.

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[1] Typhoid Fever in Children. Medical News, April 11, p. 711.

This annual tetanus epidemic is as certain as the Fourth itself, and in the large cities like New York and Chicago it amounts to about one-third of the total annual death rate from tetanus. In Chicago there are usually fifteen to thirty deaths from blank cartridge tetanus each year, while the entire number of deaths from tetanus each year is about fifty. Although there are plenty of other wounds received at this time each year, still the blank cartridge causes nearly all the tetanus infections. It is rare, indeed, that the lacerations from the exploding giant cracker are followed by tetanus. That this is not due to any infectious nature of the blank cartridge itself has been abundantly shown; repeated examinations have demonstrated that they are free from virulent tetanus germs. There can be no doubt that their danger lies in the nature of the wound they produce, and the circumstances under which the wound is received. Street dirt is a favorite habitat of the tetanus bacilli or their spores, and the hand that receives the wound is usually well covered with dirt at the time of the accident. The wad carries this dirt, with its contained organisms, deep into the hand, where the ideal anaërobic conditions exist, even excelling those of the famous nail wound of the foot. In proportion to the number of wounds received there can be no doubt that the blank cartridge wounds are far more deadly than the nail wounds, for they are certainly less common, yet they cause about as many deaths.

We should not forget that most of these deaths are preventable if the blank cartridge wounds are properly treated as soon as they are received. It is a sad fact that the greater number of cases of Fourth of July tetanus occurs in boys who have gone to some physician, not infrequently in a dispensary, who, instead of giving the wound the thorough treatment that it deserves, has superficially cleaned and dressed it. The responsibility here lies with the physician who first sees the wound. A thorough surgical treatment of blank cartridge wounds, supplemented by prophylactic injection of tetanus antitoxin when possible, would save many lives every year.

To accomplish the extinction of Fourth of July tetanus two things are necessary. The first is the enforcement of proper regulations of the sale of firearms and ammunition to minors. In cities where adequate precautions are taken, as in Washington, Fourth of July tetanus is practically absent. After this comes the education of the laity to an appreciation of the danger of this particular sort of injury, and in this the daily paper has a mission that, in a number of instances, it is making a commendable endeavor to perform. If the boy and his parent understand that an extremely large proportion of blank cartridge wounds cause lockjaw they will not be satisfied with anything less than the most thorough treatment, for the ordinary individual has a proper appreciation of the seriousness of this disease.

ANOTHER VICTIM TO PLAGUE INVESTIGATION.

From Berlin comes the news that another investigator has fallen victim to accidental infection with plague, on which he was working. This involuntary martyrdom shows the extreme virulence of the plague bacillus. From dispatches in the daily press it appears that the German government has stopped further investigation in this disease because of the danger of its dissemination. Such curtailment of the freedom of investigation will probably not meet with the approval of the scientific world, in spite of occasional victims to accidental plague. Plague is so destructive a disease that science will not remain content until this disease is fully under control and eventually eradicated. To this end continued investigation is necessary; and investigation can be so safeguarded in specially isolated institutes that all danger of the dissemination of the disease is removed. In such institutes competent men should be encouraged to delve and work by adequate emolument. The investigators should live in the institutes while working with plague, and we feel sure that there will be no lack of competent men who are willing to go on and assume all danger attending the work.

VERY ADVANCED THERAPEUTICS.

A rather curious medical assemblage, judging from newspaper accounts, has lately occurred in Connecticut. The Eclectic Medical Association of that state, which has just finished its session, was the occasion for some rather remarkable medical utterances. In the first place, the president's address, as reported, was peculiar, particularly when he had something to say about the smallpox epidemic or pandemic, which has existed in this country in a mild way for the last two or three years. He took a very cheerful view, indeed, stating—if he is quoted correctly—that smallpox is in reality something to be wished for instead of feared, and giving as his reasons that when it is prevalent we have fewer deaths from it than other diseases, and when it is really malignant we have fewer deaths from other causes. He consequently condemned vaccination, claiming that its use prepares the victim for either another disease or an early grave. There was evidently an attempt at something ultra-scientific at the meeting, as one of the speakers brought out some points which we have never seen mentioned before, and which seem worthy of comment. This speaker remarked that so much had been accomplished with argon in cancerous and other similar troubles that he had been led to experiment also with other newly discovered gases, helium, neon and krypton, and had obtained results far surpassing anything obtained from the x-ray or Finsen light treatment. We did not suppose that these substances had yet been isolated in sufficient quantities to be used to any great extent therapeutically, certainly not in tangible doses. If it had been a homeopath of the high dilution order we could imagine that he might see the possible effects of these substances even as they exist unisolated in the atmosphere and elsewhere.

BLOOD CULTURES IN PNEUMONIA.

The application to the study of pneumonia of modern methods of blood cultures is yielding interesting and important results. The most recent and also the most extensive work in this field is that of Rosenow,[1] who reports finding the pneumococcus in the cultures of the blood of pneumonics during life in 77 of 83 cases. In the 6 cases in which the cultures remained sterile there were good reasons to expect this outcome, because the cultures were made after the temperature had returned to normal; and the conclusion seems to be warranted that when the proper technical methods are used the pneumococcus may be recovered from the blood in all cases of typical pneumonia. This being the case, pneumococcemia in pneumonia can not be regarded as having an unfavorable prognostic significance, as concluded by earlier investigators, who obtained positive results in a much smaller percentage of cases. In obscure cases of pneumococcus infection blood cultures may be of positive diagnostic value. The results of blood cultures in pneumonia also tend to throw new light on the pathogenesis of the disease and its complications. Certainly the occurrence of pneumococci in the blood in practically every case of pneumonia constitutes a satisfactory explanation of many of the secondary pneumococcus localizations in this disease—the endocarditis, the arthritis, the meningitis. Perhaps the question now should read: Why are not these complications more frequent? What is the mechanism that leads to endocarditis in one case and not in so many others? Then again, this pneumococcemia revives the question as to the fundamental nature of pneumonia: Is it a general infection with a local manifestation, or is it a local disease with a secondary bacteriemia? This question can not be answered from the facts at hand. Some light would be obtained, however, if opportunity were presented to examine the blood bacteriologically at the very beginning of the attack, before any local signs are manifest.

Medical News.

ILLINOIS.

Sanitarium Incorporated.—Dr. Sanger Brown and others have incorporated the Kenilworth Sanitarium, with a capital stock of $25,000.

Gift for Neely.—At an informal reception at the Cook County Institution, Dunning, May 30, the employes of the institution presented Dr. John R. Neely, the retiring general superintendent, with a diamond stud.

New Contagious Ward.—The plans for the new $75,000 hospital for contagious diseases, to be erected in the grounds of Cook County Hospital, were submitted to the county commissioners, June 6. The building is to be four stories high, fireproof, and will accommodate 116 patients.

Personal.—Dr. William E. Shasted, Pittsfield, has returned from a trip abroad, and has resumed practice.——Dr. Philip F. Gillette, assistant physician at the Illinois Northern Hospital for the Insane, Elgin, has resigned, and has been succeeded by Dr. Joseph M. Kearney, late assistant at Cook County Hospital for the Insane.

Chicago.

Christopher Resigns.—Dr. Walter S. Christopher has resigned as professor of pediatrics in the medical department of the University of Illinois, College of Physicians and Surgeons.

Tuberculosis Sanitarium Dedicated.—St. Anne's sanitarium for the treatment of consumptives at West Division street and North 48th avenue was formally dedicated by Bishop Muldoon, May 31.

To Fight Smallpox.—The finance committee of the city council has recommended an emergency appropriation of $10,000 to be used in combating smallpox. There are now 39 patients at the isolation hospital.

Fugitive Physician Found.—Dr. Gustaf Adolph Walther, who came to Chicago apparently well qualified, but who soon began to display questionable methods in practice, and who disappeared about eight months ago while under indictment for assaulting a young girl, has been located at Tegucigalpa, Honduras.

Premature Celebration Tetanus.—"Fourth-of-July lockjaw" has begun early this year. During the last five weeks, according to the health department bulletin, seven deaths from tetanus due to firearms, toy pistols and explosions have been reported. There were only twelve all told from similar causes up to the end of July last year and only four in 1901, when the mayor's proclamation was rigorously enforced and the number was reduced from twenty-four in 1900.

Suits.—Dr. Chalmers Prentice has sued the Geneva Optical Company for $12,000, alleged to be due on a contract for the payment of royalties on the sale of retinoscopes.——Mrs. Joel Connor, in a suit filed May 29 against the Chicago Lying-in Hospital and Dispensary, claims that her boarding house business has been damaged to the extent of $10,000 by the proximity of the hospital.——Dr. Moses Furlong and William Higgins have been sued for $25,000 by a German girl, who alleges that she was anesthetized and forced to undergo an operation, the result of which has been a permanent injury to her health.

Drop in Deaths.—The drop in the death rate—amounting to a little more than 21 per cent. less than that of the previous week, to 9.8 per cent. less than the average June death rate of the previous ten years, and to 5.7 per cent. less than that of the corresponding week of 1902—is warrant, says the department of health, for the hope that the murderous mortality of the last five months may be counterbalanced by a minimum rate during the remainder of the year. The 461 deaths reported for the week ended June 6 are 120, or more than one-fourth fewer than those of the previous week, and the rate—12.73 per 1,000 of population—is the lowest for any week since that of Nov. 1, 1902, when the rate was 12.56 per 1,000. There were 31 fewer deaths under 1 year, and 31 fewer over 60 years of age, while the deaths between 1 and 5 years remained the same as the preceding week. Pneumonia shows a reduction of 51 deaths; bronchitis, 5; nervous diseases, 12; heart diseases and violence, 11 each; cancer, 9; convulsions, 7; typhoid fever, 4; influenza, 3; measles and whooping cough, 2 each. The pneumonia deaths are the lowest since the week ended Nov. 29, 1902, and the typhoid deaths the fewest since the week of July 5, 1902—the beginning of the epidemic.

The Hospital Question.—It was announced last week in the daily press that only one hospital in Chicago was operating under a license from the city, and that the others found it impossible to comply with the requirements governing the location of such institutions. In order to secure a license, a hospital must have the "consent of the person or persons who may be the owners or agents of the entire frontage of the four sides of the block in which such building is to be located and the entire frontage of the block on the opposite side of the street on which the building faces." In consequence of the prohibitory nature of this section of the building ordinance, and to test its validity, the commissioner of health requested the city prosecutor to institute proceedings against 46 hospitals which have persistently violated the ordinance in this especial regard. The city council, at its meeting, June 8, passed an ordinance which prohibits the establishment of hospitals for the treatment of the insane, inebriates, drug victims, epileptics, or for contagious diseases, unless a majority of the frontage in the block and the opposite sides of the streets facing the block is obtained. A motion to include maternities in the ordinance was lost. When such hospitals are to be more than two stories high the building must be of fireproof construction. Amendments were referred to the committee on health prohibiting the establishment of such hospitals within 200 feet of a school building, and also to prohibit the use of a hospital for more than one class of patients, and providing breathing space around hospitals to be constructed: Where there are less than twenty beds, fifteen feet on each side of the hospital must be vacant; from twenty to fifty beds, twenty-five feet; more than fifty beds, fifty feet.

MARYLAND.

Scarlet Fever Closes School.—The colored public school at Towson has been closed on account of the prevalence of scarlet fever.

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[1] Medicine, 1903, p. 435.

Personal.—Dr. P. F. O'Neil, Baltimore, has been appointed assistant to Dr. James M. Spear, secretary of the Cumberland City Board of Health, and has taken charge of the Emergency Hospital there.——Dr. James A. Stevens, Oxford, has been elected state medical examiner by the Medical and Chirurgical Faculty of Maryland, vice Dr. Charles F. Davidson, Easton, who declined re-election.

Baltimore.

May Vital Statistics.—During May 753 deaths and 678 births were reported. Scarlet fever was the most prevalent of epidemic diseases. Pulmonary tuberculosis caused 100 deaths, and pneumonia 71.

Dinner to Osler.—Ex-resident and associate physicians of the Johns Hopkins Hospital gave a dinner to Dr. William Osler, May 15, and presented him with the "Dictionary of National Biography," in 65 volumes.

Personal.—Dr. C. M. Franklin of the Sheppard and Enoch Pratt Hospital has been elected professor of psychiatry in the Woman's Medical College.——Dr. H. Barton Jacobs sailed for Liverpool, June 3.——Dr. William Lee Howard is visiting the psychopathic hospitals in Italy and France.

MASSACHUSETTS.

Boston.

New Roxbury Hospital.—The new Deaconess Hospital in West Roxbury will be 84 by 66 feet and three stories in height, of red brick and terra cotta and is to cost $105,000. It is to be one of a group of buildings to be built later on.

Personal.—Dr. Charles C. Foster of Cambridge, formerly surgeon-major of the Fifth Infantry, has been appointed medical director of the Second Brigade, M. V. M., made vacant by the retirement of Lieutenant-Colonel William H. Devine.

Better Classification of Insane.—At the recent meeting the State Board of Insanity devoted most of its attention to the great need of better classification of the insane of the state and the city. Drs. Jelly, Ayer, Adams, Copp, Howard, Page, Lane, and others, each spoke most earnestly on the great value of separating the curable from the incurable and the mild from the severe cases, as can not be done in the present extremely crowded condition of all the institutions.

A Better Report.—Not for two years and six months has the local death rate touched as low a point as for the week ended June 6, namely, 14.94 per 1,000 per annum. The decrease is general and in no special class or disease—17 deaths occurred from pneumonia, 2 from whooping cough, 10 from heart disease, and 4 from bronchitis. There were reported 31 cases of diphtheria, with 4 deaths; scarlet fever 41 cases, with 3 deaths; typhoid fever 9 cases, with 2 deaths; measles 42 cases, with 2 deaths, and tuberculosis 10 cases and 25 deaths.

NEW YORK.

Taxation of County Medical Societies.—The tax commissioners are to begin suits to test the constitutionality of the law passed by the last legislature exempting from taxation the property of county medical societies.

Buffalo.

Personal.—Dr. Harry Meade has returned from Europe.——Dr. Clawes of the Cancer Laboratory has sailed for Europe, and Dr. Burt C. Johnson is soon expected home from Europe.

New York City.

Columbia Appointments.—Dr. C. A. Herter has been appointed to the chair of pharmacology and therapeutics, Dr. Joseph A. Blake lecturer in surgery, and Drs. Forbes Hawkes and C. A. McWilliams instructors in surgery at the College of Physicians and Surgeons of Columbia University, New York.

No Fees for Health Board Physicians.—The health commissioner having heard that physicians and employes of the health department accepted gifts and fees, issued an order forbidding any physician in the employ of the department to accept a fee for professional services, or for signing certificates or affidavits to insurance blanks from persons with whom he had been brought in contact by reason of his official connection with the department.

Notification of Diseases.—The health department is considering the advisability of greatly extending the present list of reportable diseases. The most important proposed addition to the group of disease in which notification is compulsory, is puerperal septicemia. It is thought that this will serve as a restraint on the midwives. In the other group are those diseases in which notification is compulsory only in the case of institutions, though private physicians are requested to report them for the purpose of accumulating valuable statistical information. This list will probably include influenza, lobar pneumonia, broncho-pneumonia, infectious diseases of the gastro-intestinal canal and parasitic skin diseases. The board disclaims any intention of exercising sanitary surveillance over these diseases in the event of their being made reportable.

PENNSYLVANIA.

Endows Bed.—The will of the late Hannah B. Fry leaves $5,000 to St. Timothy's Hospital, Roxborough, for the endowment of a free bed.

New Buildings.—The new building of the State Insane Hospital, Harrisburg, costing $40,000 will soon be ready for occupancy. The four additional new buildings are soon to be erected at a cost of more than $250,000.

Personal.—Dr. Thomas C. Fitzsimmons of Wilkesbarre has been appointed a member of the commission of the Eastern Pennsylvania State Institution for the Feeble Minded and Epileptic.——At the recent meeting of the G. A. R. of Pennsylvania, Dr. Alfred Smith, Beaver Falls, was made medical director.

Philadelphia.

Increase in Typhoid.—For the week ended June 6, 315 new cases of typhoid fever were reported, an increase of 51 over the previous week.

Board of Education Appointments.—Dr. Charles S. Turnbull has been appointed a member of the board of education, to fill the vacancy made by the death of Dr. Thomas G. Morton. Dr. T. J. Buchanan has also been appointed a member of the board.

Early Phthisis Sanatoria.—Director Martin has a plan for establishing, for the summer, sanatoria in Fairmount Park where children of the tenement districts and persons in the early stages of phthisis may be cared for. It is the purpose to enlist charitable organizations in the work, the department exercising general supervision over these field hospitals, and furnishing certain supplies. The Red Cross Society offers to supply 25 nurses.

President Honored.—At the thirty-eighth annual meeting of the Jewish Hospital Association, held May 31, a portrait of William B. Hackenberg, for twenty-five years the president of the association, was presented to the institution. Dr. Solomon Solis-Cohen made the presentation address. The president pointed out that while the income for the year had been $61,192 the expenditures exceeded this amount by $5,026. Legacies and endowments of $67,127 had been received.

Sanatorium Opened.—The twenty-seventh annual opening of the Red Bank Sanatorium on the Delaware River, a short distance below Philadelphia, took place June 6. Fifteen hundred children of the poor were delightfully cared for on the opening day by this life-saving charity. From the opening until August 31, holidays and Sundays excepted, free excursion boats hourly carry passengers to this river resort. Sick children are freely cared for in the hospital on the grounds and are provided with food and delicacies.

Pure Food Crusade.—B. F. Warren, commissioner of the dairy and food department, has begun an active crusade against adulterated products. Warrants have been served for a score or more of prominent dealers, charging them with selling adulterated lard, and an equal number of warrants have been sworn out for other dealers. Analysis of the so-called lard shows that it consists largely of cotton-seed oil and tallow stearin. A large corps of agents are now canvassing the city, with instructions to prosecute to the fullest extent any violations of the pure food law.

Physical Fitness of Teachers.—The hygiene committee of the board of education has adopted a rule requiring all candidates for teaching positions in the public schools to furnish certificates of physical fitness. The applicant must answer questions as to recent illness, association with cases of phthisis, whether disease of throat, eye or ear exists, and as to the use of narcotics and alcoholic liquors. In addition, a reputable physician must certify whether the applicant has phthisis, leprosy, contagious disease of the skin or mucous membrane, defect of hearing, an irremediable defect of vision, etc.

The Index Medicus.—The College of Physicians recently adopted the following resolutions:

WHEREAS, Through the generosity of the Carnegie Institution, which has pledged $10,000 a year for three years, the *Index Medicus* has been revived; and

WHEREAS, The index is valuable to the profession, not only of America, but of the whole world, and its permanent establishment is of the utmost importance to the profession at large; and

WHEREAS, If the profession does not support this publication by a generous subscription it can not be expected that the Carnegie

Institution will continue to defray nearly the entire expense of its publication; therefore,

Resolved, That the College of Physicians requests each fellow, if within his power, to subscribe for at least one copy.

Against Impure Milk.—Dr. A. C. Abbott, chief city bacteriologist, who entered on his duties as chief of the bureau of health, June 1, has begun a campaign against impure milk. Additional inspectors are to be provided. The condition of milk shops are being investigated, and a number of dealers have been ordered to cleanse their places or to close up. It is the purpose to reduce the high infant mortality that commonly prevails during the summer months. A conference of the mayor, Dr. Martin, director of the department of health, Dr. Abbott, and the state veterinarian will perhaps result in a request to the State Board of Health to act in conjunction with the local authorities in regulating dairymen in the handling and marketing of milk.

GENERAL.

Cholera Decreasing.—The recrudescence of cholera in the Philippines is subsiding.

The new board of health of Hawaii organized for work and held its first meeting May 13. President Cooper and Dr. W. H. Mays are the two physicians on the board, the other four are lay members.

Panama Canal Construction.—There are 45 physicians employed to care for the 1,500 laborers and foremen and 160 civil engineers who are now in the pay of the United States, working on the canal at the isthmus. The daily expense of the construction amounts to about $5,000, according to the Chicago *Post*.

Non-Lepers Prefer Life of Ease.—Inmates of the leper colony, Molokai, Hawaii, who are free from leprosy, are unwilling to leave. Some of these went there to care for relatives who have since died. They are not furnished food but live on the hospitality of the lepers. Their removal is attended with difficulty, according to reports by the territorial board of health. A re-examination of all within the colony is ordered by the board to determine who are free from the disease. None, however, wants to leave, because of the easy life and the supply of clothing and food at public expense in a delightful climate, which they now enjoy.

International Hygiene Congress.—The following Committee of Organization for the United States for the Eleventh International Congress of Hygiene and Demography, to be held in Brussels, Sept. 2 to 8, 1903, has been appointed, at the request of the Belgian government, by the Department of State: Drs. E. A. de Schweinitz and A. B. Richardson, Columbian University, Washington, D. C.; Dr. John Marshall, University of Pennsylvania; Dr. Harrington, professor of hygiene, Harvard University. The committee desires to secure the co-operation of all in this country who are engaged in hygienic work, both in attendance at the meeting in Brussels, and in sending papers to the congress. The congress will be divided into two sections, hygiene and demography. The subjects which will be considered are the relation of bacteria and parasites to hygiene, the hygiene of foods, the treatment and prevention of communicable diseases, etc. The important subject of the communicability of tuberculosis will be discussed in its various phases by prominent men. The fee for membership is 25 francs, which may be sent Secretary-General M. le Dr. Felix Pulzeys, Rue Forgeur 1. à Liège, Belgium. Those proposing to attend or send papers will please notify Dr. E. A. de Schweinitz, Washington, D. C.

CANADA.

Large Donations to Cottage Hospital Fund.—On May 17 the Lady Minto Cottage Hospital Fund received $51,000, the following four gentlemen of Toronto each contributing $10,000: Senator George A. Cox, Mr. D. D. Mann, Mr. William McKenzie and Mr. Chester D. Massey.

Isolation of Scarlet Fever Patients in Ontario.—Three months ago the Ontario Board of Health, at their regular quarterly meeting, decided that all patients suffering from scarlet fever must be isolated and removed to buildings or tents specially prepared for them. This stringent measure was deemed advisable owing to the very high death rate which has now prevailed in Ontario for some months from this disease. Several benevolent societies have taken the matter up, as they consider that any regulation which takes a child away from its mother and removes it to a tent, especially in the dead of winter, is inhuman.

FOREIGN.

Yellow fever has broken out at Progresso, Mexico, on the Gulf Coast.

Official Warning Against an Anti-Morphin Remedy.—The Berlin chief of police has issued an official warning against "Nicolicin," a remedy advertised to cure morphin addiction. He states that the principal ingredient is morphin, with a little salicylic acid, and it is thus unsuited to the purpose for which it is sold.

Physicians in Spanish Congress.—The recent elections resulted in the election of four physicians to the lower house and seven to the upper house of the Spanish parliament. Dr. Cortezo, editor of the *Siglo Medico* and president of the Internal Medical Press Association, was appointed vice-president of the upper house.

Norwegian Medical Study Trip.—An attractive program is announced for the trip in August to the various health resorts in or near Norway. The party will gather at Hankö, August 7 and disband the 21st. The total expenses of the trip will be at most less than $50. Dr. S. Meyer, St. Kongensgade 71, Copenhagen, has charge of the trip.

Plague Investigation Stopped.—Because of the death from plague of Dr. Milan Sachs, who was experimenting with the germs at the Berlin Hospital, the government has ordered further experiments to cease, fearing the danger to the public from the handling of the deadly germs. The investigations were conducted in an isolated laboratory and no outsider was allowed to approach.

Consultations for Economic Questions.—The Leipsic "Verband" has organized an information bureau for consultations in regard to all matters affecting the material interests of members of the profession in Germany. A leading legal authority has been appointed consultant. It is especially designed to aid physicians in entering on contract practice or altering their contracts. Advice is free to members of the "Verband" and to local societies which may apply.

Collective Cancer Inquiry in Hungary.—Dollinger of Budapest has undertaken a collective inquiry as to the number of cases of cancer in treatment, October 15, 1903. The step was taken at the request of the government and question blanks have been sent to all the physicians in the country. They are urged to take note of tumors in the animals in contact with the cancer subjects, dogs, cats, cows and horses. The fate of persons previously operated on for the removal of malignant neoplasms is also to form part of the study.

Campaign Against Alcoholism.—An important step has been taken in this line by the German ministers of agriculture, commerce, of the interior and of public instruction, who have signed a joint appeal to the local authorities throughout Prussia urging the establishment of comfortable reading rooms, assembly halls, etc., where workingmen may gather without the necessity or the temptation to buy spirituous liquors. Drinking fountains should be erected and abundant opportunities provided for procuring temperance drinks in the public places and populous streets, and the public should be instructed in regard to the dangers of alcohol on every suitable occasion. The local authorities are requested to report the results in 1905.

Sclavo's Anti-Anthrax Serum Wins the Riberi Prize.—The Turin Academy of Medicine has awarded the Riberi prize of $4,000 to Professor Sclavo for his successful anti-anthrax serum, as the best work accomplished in the medical field during the five years since the prize was last awarded. In a recent communication on the subject Sclavo stated that 293 persons have been treated for malignant pustule with anti-anthrax serum, including a case recently reported by Sanfelice, in which the serum of dogs immunized against anthrax was used. Sclavo announces that a rise of temperature after the injection is a most valuable sign, as it indicates a favorable prognosis as a rule. When the serum is used local treatment is unnecessary, and if administered in time the lesion heals and the edema is spontaneously absorbed. He has found the best method to be a single large dose, slowly injecting 40 to 50 c.c. at three or four points in the forearm or back of the hand. This serum treatment has found a cordial welcome in Argentina, where it has been applied in 130 cases, reducing the mortality to zero except in the moribund cases. Competition for the Riberi prize is open to the world, as previously announced in these columns, but preference is given to a work that tends to improve hygienic conditions in Italy.

The Outlook for the Physician.—Dr. Hofmann, Dillenburg, in a letter to the *Deutsche Med. Wochft.* discusses the outlook for the profession and thinks that the aim of the physician should be to be assured of a comfortable income while reducing the single fee to the lowest possible figure. He thinks that the experience of the duchy of Nassau should prove instructive. It was early appreciated that the health of the populace was a most important public matter and, therefore, all the physicians in the country were supported by the state at a comparatively high salary for those days. The duchy was divided into "medical districts," each with its physician, although the inhabitants were not restricted to employ the nearest. The state paid one-half the income allowed him, and the other half and more if possible he was to make by his practice. The single fee was established by law at fifteen cents for a call in his district, and ten cents for office consultation. The arrangement was considered highly satisfactory for all parties and the profession enjoyed great prestige. In 1866 the duchy lost its political independence and the medical officials their state support, but the medical districts were maintained by the population which paid the physicians a stipend equal to twelve cents per capita on an average, for which he in return treated the poor gratis. The old fee has been retained in some of the districts, but in others it has been increased to a maximum of twenty four cents under this régime. The physician's fee at all times was the same, irrespective of the distance from his residence. Hofmann thinks that some such arrangement outside of the large cities would solve many problems.

Annual Meeting of German Central Committee for Erection of Sanatoria.—The general interest that has been aroused in Germany in regard to the sanatorium treatment of tuberculosis was well illustrated by this recent meeting. The committee has now 1,300 members, including 83 physicians, 6 government ministers, 24 insurance companies, 159 government employes, 344 merchants and manufacturers and 39 business houses with 4 boards of trade. The principal address was by von Leyden, who reported most gratifying results from the movement. In the 74 sanatoria at present in operation 30,000 patients were treated during the year, and 80 per cent. are so much improved that they can be called practically cured He stated that the mortality has diminished from 30.95 per 10,000 in 1875, to 19.50 in 1901. He expatiated on the marked improvement that has followed the organized effort to care for the families when the bread winner is sent to the sanatorium. Gobel stated that the number of persons to whom insurance was paid on account of tuberculosis has increased from 11 to 13 per cent. since 1898, but, on the other hand, the number of pensions paid for non tuberculous affections has diminished by 4 per cent. The ravages of tuberculosis are shown by the fact that out of every 1,000 indemnities paid, 549 were on account of tuberculosis at the age of 20 to 24, 509 from 26 to 29, and 429 from 30 to 34 These figures were for men The corresponding ones for women are 425, 343 and 258. Each patient has cost the national insurance societies 355 marks, about $90, the daily expense being about $1 (4 marks, 69 pfennigs). The length of the average sanatorium course was 79 days. During the last four years the proportion of those dismissed practically cured has increased from 27 to 31 per cent Other speakers urged the necessity of isolation of consumptives and of preventive and curative treatment of tuberculosis in children who are more often affected than hitherto deemed possible Putter advocated that prophylaxis should be along the three lines of education of the tuberculous subject, his isolation as far as possible from the rest of his family in his home and free formalin disinfection.

LONDON LETTER.

Chloroform in the Preparation of Vaccine.

At the Royal Society Dr. Alan B. Green described a method of using chloroform for the elimination of extraneous organisms from vaccine lymph Sterile air is passed through chloroform and becomes saturated with it It is then passed through the vaccine emulsion which has been prepared by triturating one part of vaccine pulp with three parts by weight of distilled water. It is essential that no liquid chloroform be allowed to pass into the vaccine since its presence is strongly inimical to the potency of the vaccine. The vaccine is quickly saturated with chloroform, the excess after saturation escaping automatically. The germicidal action is very rapid, emulsions with as many as 100,000 organisms per platinum loop become free from them in six hours. After elimination of extraneous bacteria in this way the chloroform in the emulsion is evaporated by passing through it a stream of sterile air. Only the non-spore bearing bacteria are killed by this procedure; but in some thousands of vaccines examined in the government lymph laboratories the only spore-bearing organisms found were non-pathogenic. Dr. Green thinks that this method will prove valuable when there is an urgent demand for a rapid supply of vaccine lymph, such as may occur during smallpox epidemics; vaccinations from the lymph so prepared have given excellent results.

The Wounded in Naval Warfare.

At the Royal United Service Institution Dr. Phillip Randall, formerly a naval surgeon, read an important paper on "The Disposal of the Wounded in Naval Warfare." He pointed out that although attempts had recently been made to call attention to the subject there was almost complete absence of it in the works of all the leading authorities on naval warfare. Medical officers viewed with forboding the prospect of being called on to deal with a large number of serious injuries. The conditions of naval warfare have greatly changed since the British navy was engaged in great wars. The sick berth of the present day has gained light and air, but its situation in all modern ships was untenable in warfare. A return to the cockpit principle had been decided on officially for some time, but beyond the selection of a site nothing had been done to make the place suitable. The number of wounded that would have to be dealt with after an engagement should be determined as approximately as possible. After giving figures of some of the battles of the last great wars Dr. Randall said that the working average of 7 per cent. of the complement, as the number of wounded to be expected in each ship, was the irreducible minimum. He then considered the condition of the ship after action, the accommodation provided in naval hospitals on land and the probable distances from such hospitals at which naval action might occur. The one conclusion was that in the fighting line afloat as in that ashore all treatment of the wounded beyond "first-aid" would be impracticable, and further, that after-treatment on board would be practically impossible. The adoption of the principle of hospital ships for fleets would be quite practicable and would go a long way to meet the needs of the situation. Every fleet should have one or more hospital ships attached to it. These would cruise with the fleets, and having first received all cases of serious injury from the ships would accompany them to the verge of safety when they went into action. Each hospital ship should be provided with as many large and roomy boats as it could carry. By means of these endeavors would be made to keep close communication with the fighting line, seizing on every opportunity to collect and transfer to the hospital ship as many wounded as possible.

Correspondence.

The Transmission of Yellow Fever.

HAVANA, CUBA, May 28, 1903.

To the Editor:—Dr. James Carroll, U. S. A., in the paper which he published under the above title in THE JOURNAL, May 23, does me the honor of arguing at great length on my statement that the yellow fever Army board of which he was a member had tacitly denied my rights of priority. I was thus referring to many items of the mosquito theory which the said board had presented to the public as so many new discoveries of their own, ignoring the circumstance that although I had not always been in a position to demonstrate my assertions experimentally, I had included those same items in my theory of yellow fever transmission. Dr. Carroll has indeed now changed the tacit denial into an explicit one, without, however, refuting any of the evidence on which my former statement had been founded. (See my paper in *Medicine*, Detroit, March, 1903, pp. 178 and 179.) I agree with him, however, in thinking that rather than to enter into any controversy it is better to leave the decision to those who will take the pains of reading our respective publications, including, however, one which Dr. Carroll has forgotten, namely, my paper on "Two Different Ways in Which Yellow Fever May Be Transmitted by Mosquitoes," which was published in THE JOURNAL, Nov. 23, 1901. In this paper I have clearly shown that the Army board has never seriously investigated my direct inoculation with recently contaminated mosquitoes. When I had asked them to do so they excused themselves, alleging that they had too few non-immunes at their disposal. This investigation, if favorable to their presumption, would have been the only justification for their attitude of persistent denial that any of my positive results deserve to be taken into consideration. They took the ground that the yellow fever germ must be a parasite of the same nature as the malaria parasite, and that the same rules must be applicable to both. That they were quite mistaken in this last inference I have recently proved in a paper on "Probable Nature and Life Cycle of the Yellow Fever Germ" (see *Revista de Medicina Tropical* of Havana, English text), in which I have demonstrated that although it must be admitted that both germs appear to be protozoa of similar nature and life cycle, yet there is this essential difference between them, that while the malaria germ has the human subject for its permanent host and the anopheles for its intermediate host, the reverse happens with the yellow fever germ whose permanent host is the stegomyia and its intermediate one the human subject. A difference which leaves out of the question such analogies as the Army board has attempted to establish between the two cases.

The phase of development of the parasitic germ which takes place in the body of the mosquito host must consequently be considered as quite different in the two diseases. In yellow fever the interval of time which elapses between the bite of the fresh stegomyia on the infecting patient and the moment when the insect is able to reproduce the disease, in its complete forms, must be supposed to represent the number of days required by the embryo parasites to reach their adult development after they have been sucked up with the blood of the yellow fever patient; but not, as happens with the malaria parasite in the body of the anopheles, the time required for the sexual reproduction of the parasite and for the accumulation of the newly-hatched embryos in the salivary glands of the insect, as the Army board had assumed.

I feel bound, before closing this article, to answer several charges which Dr. Carroll has brought against me. One is, in substance, that availing himself of my present position I have shirked the opportunity of testing my own method of direct inoculation with recently contaminated mosquitoes by obtaining an order forbidding further experiments with mosquitoes having ten or more days of contamination, and only allowing the handling of contaminated mosquitoes to persons well acquainted with the dangers, etc. (See *Medicine, loo cit.*) How Dr. Carroll manages to reconcile his conclusions with these premises I fail to understand, specially if he remembers that there have been only a few imported cases of yellow fever during the last year, and none has originated on the island.

Another charge is that my claims of priority should have been accompanied by unmistakable evidence, in print, as proof that the facts have been demonstrated and duly reported. I have never claimed that I had demonstrated the facts, but I have proved by unmistakable evidence, in print, that I had foretold the results which the Army board afterwards confirmed, giving them as original discoveries of their own.

My table of 104 inoculated persons with recently contaminated mosquitoes (so far as I could judge, operating as I did with insects which were not bred from the larvæ), was handed to the Publication Committee of the Third Pan-American Congress, together with the paper which I read at that congress. Seeing that the publication of the transactions was delayed, I gave a copy of those same tables to Dr. Coronado, who published them in a volume which he dedicated to me and in which were included several reprints from the *Revista de la Asociacion Médica Farmaceutica*. I am sending a copy of this book and also of my paper on "Probable Nature," etc., to THE JOURNAL.

Dr Carroll somewhat sarcastically refers to my humane feeling in having refrained from proving my theory, in my own series of inoculations, for fear of producing a severe attack on persons who had relied on my assurance that no risks would be incurred through my procedure; but he seems to doubt my sincerity because he once saw me apply a fully contaminated mosquito to a non-immune. He, however, carefully silences the circumstance that this non-immune had been informed of the risk that he was incurring, that he had accepted that risk in view of a certain compensation, and that I was induced to perform the experiment believing that it entailed a lesser risk than letting Dr. Calda's assertion go unchallenged when he declared that this same man had been rendered immune through the injection of a secret preparation for the efficacy of which he was trying to obtain our support.

The only part of Dr. Carroll's criticism to which I must plead guilty is the confusion arising from my descriptions of my case No. 3. The second statement to which he refers was made from memory at a time when I had mislaid my original notes. I found them again, however, last year, and ascertained that the experiment had been really made under the conditions which I took the first opportunity of publishing, as a footnote, in the *Revista Médica Farmaceutica*, February, 1902, page 369.

With these explanations I trust that Dr. Carroll and the readers of THE JOURNAL will be satisfied. Dr. Carroll, on the other hand, does not give his reasons for reducing to eight days the *minimum* space of time required for the contamination of the stegomyia while the Army board has fixed that limit at from 10 to 12 days; nor does he present any reasonable grounds for his belief that, *cæteris paribus*, the simultaneous bites of several contaminated mosquitoes should not be expected to produce more severe effects than that of only one of those insects. The Army board, at any rate, is not responsible for these innovations of Dr. Carroll any more than for the charges which he has brought against me.

Apart from such secondary questions, as claims of priority must be acknowledged to be, I must reassert once more my keen appreciation of the invaluable work which the yellow fever Army board has achieved, and I gladly recognize that all the arguments on which my recent paper on the life cycle of the yellow fever germ are entirely founded on the findings of that board. I also beg to express my deepest sympathy in the untimely death of its accomplished and enthusiastic chairman, Dr. Reed, and in that of Dr. Lazear, who was probably the first American convert to the mosquito theory and died a martyr to his scientific zeal in the course of its investigation.

CARLOS J. FINLAY, M.D.
Chief Sanitary Officer of Cuba.

HAVANA, CUBA, May 30, 1903.

To the Editor:—Being the only other survivor of the Army yellow fever board which demonstrated beyond further doubt the transmission of that disease by the mosquito *Stegomyia fasciata*, I may be permitted to record a few facts in connection with said investigation, and in refutation of the openly-made or implied assertions by my learned colleague and late coworker, Dr. James Carroll, Washington, D. C., published in THE JOURNAL, May 23, 1903.

The omission of my name in the early part of the article referred to, where mention is made of Drs. Reed and Lazear, loses its importance before my eyes, when, on continuing the reading of the text, I find it directed principally in a fruitless endeavor to assail Dr. Finlay's right to the honor of the discovery of the only known way by which yellow fever is transmitted.

Aside from this attack on Dr. Finlay's claims, all that appears in Dr. Carroll's paper has been published before in the various articles presented by the Army board by Drs. Guiteras, Gorgas, Ross and myself. (*Revista de Medicina y Cirugia*, Habana, Agosto, 1901.)

Before going further I desire emphatically to affirm: That I was present when the question of following out Dr. Finlay's mosquito theory was brought up by the Army yellow fever board, as it was my right and duty to be, and as it is recorded in our Preliminary Note (reprint from the proceedings of the twenty-eighth annual meeting of the American Public Health Association, October, 1900). That, at that time, neither Drs. Reed, Carroll nor myself believed in said theory, the only one of us inclined to consider it favorably being my friend and classmate, Dr. Jesse W. Lazear. That the work in the lines of Finlay's theory was undertaken as a matter of course, from the fact that a thorough investigation into the etiology of yellow fever was expected of our board, and not because as a body the board thought any too well of it. That of us all, Dr. Lazear was the only one at the time prepared to initiate the work in this direction he being thoroughly familiar with the anatomy and biology of the culex and conversant with the technic required; he had already bred numerous varieties in his laboratory at Camp Columbia, and had been sending specimens to Dr Howard, entomologist, Department of Agriculture, Washington, for aid in identifying the different species That Dr. Lazear was the member of the board, Dr Reed being absent in Washington, who produced our first two cases by the bites of mosquitoes, in the persons of Dr Carroll, who, being an unbeliever, allowed him to apply one mosquito on August 27 and an American soldier, who was bitten by the same insect, and three others, Aug 31, 1900. That Dr. Lazear, not content with this and not in ignorance, for he had suggested to me that the origin of Carroll's and the soldier's infection was, deliberately allowed himself to be bitten by a mosquito while in one of the wards of the yellow fever hospital (Las Animas) September 13, at a time when Carroll and the soldier were convalescing from their attacks I am convinced that this mosquito produced the infection which caused his death Sept 25, 1900

Major Reed was summoned from Washington and the investigation was then undertaken exclusively on the mosquito theory

These are the facts which I deem necessary to make known for the present

No one can regret more than I the circumstances which may have led Dr Finlay to regard the stand taken by the Army yellow fever board as a "tacit denial of his rights to priority", but his false interpretation of our writings could have never induced me to demean the achievements of this "grand old man" Neither the Army board, Dr Carroll or any one can deprive Dr Finlay of the glory of his discovery What matters it, and what wonder is it, that he could not impart to the near-sighted all that he knew when we consider that he lacked the necessary technical training and the material means which were so bountifully placed at our disposal for the demonstration? If he did not indeed convince us at the time that the mosquito was the only means of propagating the disease, are we not convinced of it to day And is it not the same mosquito to which he pointed?

Had we followed out his suggestions for clearing the city of yellow fever (*New York Medical Record*, May 27, 1899), and which were later put into practice with but little variation by Major Gorgas the date of our liberation from the scourge would have been anticipated by three years

Dr. Carroll says

> It is too late after facts have been proved and recorded by others, to claim priority unless one can point to unmistakable evidence in print as proof that the facts have been demonstrated and duly reported

According to this, Dr Finlay undoubtedly is entitled to priority, he demonstrated to himself and reported long ago the true facts of a fundamental principle, which the Army board, by its superior advantages, demonstrated more convincingly to the world ARISTIDES AGRAMONTE, M D

The Library of the El Paso County Medical Society.

DENVER, June 1, 1903.

To the Editor —There are but few cities in the United States with a population of less than 25,000 that can boast of a medical library. I was, therefore, agreeably surprised to find one in a recent visit to Colorado Springs. It is housed in a separate alcove in the Corbin Library of the Colorado College. It contains over one thousand books, all arranged in alphabetical order by authors under the following classification 1, Anatomy, 2, biographies; 3, chemistry; 4, dentistry, 5, gynecology, 6, hygiene, 7, history, 8, materia medica. 9, medical diagnosis; 10, medical jurisprudence, 11, medicine, 12, miscellaneous, 13, obstetrics, 14, pathology, 15, periodicals and reprints; 16, physiology; 17, reference books, 18, reports; 19, surgery; 20, veterinary All medical journals are arranged alphabetically by titles. Reprints are filed in cases under an approximate classification by subjects. A card catalogue arranged by subjects is placed in the alcove, and an author's catalogue is placed in the card catalogue in the general librarian's office The system of classification adopted by this library is unique in that all the subjects are arranged alphabetically I find it very admirable for a small library. It looks odd at first to find dentistry flanked by chemistry and gynecology, and physiology between periodicals and reference works, but it certainly has its advantages. Once one knows that everything is arranged alphabetically he can easily find what he wants.

All this was surprising enough, but I noticed a neatly bound pamphlet dangling on a ribbon, across which I read the words, "Catalogue of the Library of the El Paso County Medical Society."

All the work, the arrangement classification and cataloging was done, not by a hired librarian, but by a committee composed of busy practitioners, Drs R K. Hutchings, W H Swan, F. L. Dennis and H W. Hoagland This committee has done a noble work which the profession of Colorado Springs will come to appreciate more and more as years go by

The library contains a few old books of interest to the lover of *curiosa*. John Friend's Emmenologia, 1752; Sydenham's works, 1740, and N. Robinson's 'A New Method of Treating Consumption.' There will be not a few who will be anxious to find out something about this "new method," now two hundred years old I will therefore transcribe the full title of the book, which reads as follows.

> A new method of treating consumption, wherein all the decays incident to human bodies are mechanically accounted for With some consideration touching the difference between consumption and other decays that naturally attend old age To which are added arguments in defense of the possibility of curing ulcers of the lungs as also reasons for demonstrating that the irregular discharges of all the evacuations in consumption arise from the resistance of the heart not decaying in a simple proportion to the resistance of other parts

From the title one can gather hints as to the curious contents of the book. By the way, there is another book by the same Johnson on which I would like to spend a few hours, namely:

> A treatise on the virtues of a crust of bread, eat early in a morning fast, to which are added some particular remarks concerning the great cures accomplished by the saliva, or fasting spittle as when externally applied, or when internally given, in the scurvy, gravel, stone, rheumatism and diverse other diseases arising from obstruction

Well, "the virtue of a crust of bread eat early in a morning fast' is an experiment with the effects of which legions are fully acquainted. But of "spittle" applied externally I have heard it used only in cases of violent emergencies and under provoking circumstances C. D. SPIVAK, M D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

DO NEGROES RECOVER FROM PHTHISIS?

ATLANTA, GA, June 2, 1903

To the Editor —I see in THE JOURNAL (May 30 p 1520) that Dr Francis Crosson of New Mexico is desirous of information on tuberculosis among negroes. After fifteen years of large experience with tuberculosis among the negroes on the farm and in the towns, I can not recall a single case in which treatment made the slightest impression Not only were all the cases fatal, but the negro succumbs most readily to the infection, and so rapid is the progress of the disease that death soon claims the victim The peculiar hue of the negro's skin is almost an infallible characteristic of the disease

JOHN E ASHCROFT

CHATTANOOGA, TENN, June 2, 1903

To the Editor —In response to the request of Dr. Crosson of Albuquerque, New Mexico, I observe as follows From a very extensive professional knowledge of the negro, both in public hospital work and in private practice, and covering a third of a century, I have come to the conclusion that the colored race as we meet it in the south, is specially susceptible to the inroads of tuberculosis, primarily, and succumbs to this great white plague very rapidly Indeed, I regard tuberculosis as one among the greatest of the foes of the African under civilization in the United States and if one of this race ever recovered under my own observation, after contracting consumption, I certainly do not remember it now With the profession generally in this southern section of our common country, it is a sentiment that when a negro becomes visibly affected with pulmonary phthisis his doom is already practically sealed and there is a very short period expected to intervene between the victim and his taking off as soon as a diagnosis becomes readily appreciable.

E. A. Cobleigh.

Mobile, Ala. June 3, 1903.

To the Editor:—Some years ago, while assistant superintendent of the Alabama Insane Hospital at Tuscaloosa, I availed myself of the excellent opportunity there offered of studying the relative frequency and curability of tuberculosis in the white and colored races, from both a clinical and pathologic standpoint. The results of my observations were published in the *New York Medical Journal*, Feb. 23, 1895, and may be epitomized as follows: The mortality from tuberculosis is greater in the negro race than in the white. The disease runs a more rapidly fatal course in the negro. General miliary tuberculosis is many times more frequent in the negro. Instances of arrest or cure of tubercular disease are comparatively rare in the negro. Nevertheless, recovery from tuberculosis is not unknown in negroes; I have known two cases.

E. D. Bondurant.

Agricultural College, Miss., June 5, 1903.

To the Editor:—In answer to Francis Crosson's inquiry, I will say that I have known only one case to recover in a practice of 28 years. It is an almost unknown occurrence, and there are many dying in this country from tuberculosis. Tuberculosis with the negro before they were freed was almost unknown. Then they were fed well, clothed well, housed comfortably, made to keep regular hours, and when one was taken sick the very best nursing and medical attention was given him. The kind friends of the negro in the north who are anxious to help him with their money could do him no greater service than to provide a fund to be used in securing him good nursing and first-class medical attention when he is sick. They have one habit that I am not sure they had when slaves, viz., sleeping with their head covered; that adds much to cause this succumbing to tuberculosis.

W. H. Barr, M.D.

Marriages.

B. F. Walker, M.D., Laton, Cal., at Winchester, Ill., May 26.

L. Mae James, M.D., to John J. Houton, M.D., both of Detroit, Mich., June 2.

A. C. Ecke, M.D., Chicago, to Miss Sadie Beaman of Fond du Lac, Wis., May 31.

Charles Edward Terry, M.D., to Miss Marion Stuart, at Annapolis, Md., May 29.

Fred Clifton Honnold, M.D., Riverside, Ill., to Miss Aimee Coulter of Chicago, June 10.

David M. McFall, M.D., Mattoon, Ill., to Miss Fannie Johnson of Quincy, Mass., June 3.

Rowland McFarland, M.D., to Miss Maude Elena La Fergey, both of Daggett, Cal., April 14.

Marion Russell Thomas, M.D., Savannah, Ga., to Miss Ethel Ray Butler of Baltimore, June 9.

Claude Allen Thompson, M.D., to Miss Harriett Pauline Shoenfelt, both of Muskogee, I. T., May 24.

Arthur G. Kessler, M.D., Lyons, Cook County, Ill., to Miss Mary L. Barnum, at Waukegan, Ill., May 20.

Deaths.

Timothy Barnard Chisholm, M.D. Atlanta (Ga.) Medical College, 1861, acting assistant surgeon in the Confederate service; for many years county physician and coroner; a member of the Medical Association of Georgia and of the Georgia Medical Society of Savannah, died at his home in that city, May 7, after an illness of three days, aged 63.

John Newton Dexter Shinkel, M.D. Rush Medical College, Chicago, 1885, a member of the American Medical Association, Mississippi State Medical Association, Mississippi State Board of Health, Tri-State Medical Association; vice-president International Association of Railway Surgeons, 1899-1890; died suddenly at his home in Friar Point, Miss., May 26.

John B. Burdett, M.D. College of Physicians, New York, 1856, for several years president of the Hudson County (N. J.) Medical Society and once president of the Hudson County Pathological Society, died at his home in Jersey City, May 21, from Bright's disease, after an illness of three years, aged 69.

Andrew Louden Chapman, M.D. St. Louis Medical College, 1857, died from heart disease, May 15, at his home in Kansas City, Mo., after a long illness, aged 77. He was at one time the editor and publisher of the *New Medical Era and Sanitarium*. He retired from active practice in 1882.

Eliphalet L. Patee, M.D. Starling Medical College, Columbus, Ohio, 1852, surgeon during the Civil War; surgeon-general of Kansas, 1892-1894, member of the Association of Military Surgeons of the United States, died recently at his home in Manhattan, Kan.

Philip H. Keyser, M.D. Chicago Homeopathic Medical College, 1893; Colorado School of Medicine, Boulder, 1902, a member of the American Medical Association, was found dead at his home in Boulder, May 24, aged 31. Autopsy revealed no cause.

William O. Davies, M.D. captain and assistant surgeon U. S. V., a graduate of the University of Pennsylvania, died at his home in Philadelphia, May 26, after a long illness contracted during his service in the Philippine Islands, aged 36.

Dwight Scott Chamberlain, M.D. New York University, 1862, surgeon during the Civil War, but since 1868 engaged in the law and banking business, died at his home in Lyons, N. Y., May 11, from typhoid fever, after a long illness, aged 64.

Hiram Henry Bingham, M.D. College of Homeopathic Medicine and Surgery of the University of Minnesota, 1896, of Herman, Minn., died in Minneapolis, May 8, from tuberculosis of the intestines, after an illness of two years, aged 28.

Charles F. Hamlin, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1892, a member of the American Medical Association, died at his home in Medway, Mass., May 16, from pneumonia, after an illness of two weeks, aged 34.

Albert N. Robert, M.D. Bellevue Hospital Medical College, New York, 1897, died suddenly from heart disease on the train while returning from his old home in Holyoke, Mass., to his home in Volcano, Cal., May 5, aged 29.

Gustave Boucher, M.D. Royal University of Naples, Italy, 1864, of South Brooklyn, N. Y., died in the Columbus Hospital, Manhattan, May 21, from locomotor ataxia, after an illness of two years, aged 57.

George Osgood Hildreth, M.D. Transylvania University, Lexington, Ky., 1835, the oldest practitioner of Marietta, Ohio, died at his home in that place, May 3, after an illness of four months, aged 90.

W. M. Willingham, M.D. Atlanta (Ga.) Medical College, 1874, died suddenly, May 12, near his home in Crawford, Ga. He had represented Oglethorpe County for several years in the legislature.

Bernard C. Nunez de Villavicencio, M.D. University of Pennsylvania, Philadelphia, 1865, formerly of Galveston, Texas, died at his home in New Orleans, May 21, after a brief illness, aged 64.

Mark T. Loope, M.D. Baltimore Medical College, 1893, surgeon of the Northern Pacific Railway, at Hope, Idaho, died in a hospital at Spokane, Wash., May 22, after a brief illness, aged 46.

John Van Harlingen, M.D. College of Physicians and Surgeons, New York, 1869, died at his home in Brooklyn, N. Y., May 17, from heart disease, after an illness of four months, aged 57.

Henry Klemm, M.D. St. Louis College of Physicians and Surgeons, 1882, died at his home in St. Louis, May 24, after an illness of three months, following an attack of influenza, aged 61.

Nicholas Pfeifer, M.D. Penn Medical University, Philadelphia, 1863, surgeon during the Civil War, died at his home in Lindenhurst, Long Island, N. Y., May 24, after a long illness, aged 83.

Max J. Reinhold, M.D. Hahnemann Medical College, Philadelphia, 1879, died from hemorrhage of the stomach at his home in Williamsport, Pa., after a long illness, May 12, aged 47.

Thomas H. Mathers, M.D. Medical College of Ohio, Cincinnati, 1883, of Lillovet, B. C., died from septicemia following frozen feet, at New Westminster, B.C., April 16, aged 45.

Samuel S. Scott, M.D. Medical College of Ohio, Cincinnati, 1854, a surgeon in the Confederate service during the Civil War, died at his home in Erlanger, Ky., May 22, aged 77.

Waller Overton Bullock, M.D. Bellevue Hospital Medical College, 1869, died at his home in Lexington, Ky., May 18, from paralysis, after an invalidism of four years, aged 61.

Joseph B. Cutts, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1842, an early settler of Polo, Ill., died at the home of his son in St. Louis, May 18, aged 83.

Thomas B. Ennor, M.D. State University of Iowa, Iowa City, 1888, of Potosi, Wis., died at Phoenix, Ariz., April 27, from tuberculosis, after an illness of one year, aged 40.

Arthur A. Blondin, M.D. Northwest Medical College, St. Joseph, Mo., 1892, of Alturas, Cal., died at a hospital in San Francisco, April 28, from heart disease, aged 62.

Henry D. Belden, M.D. University of Vermont, Burlington, 1877, a veteran of the Civil War, died from locomotor ataxia at his home in St. Albans, Vt., May 21, aged 57.

John R. Van Horn, M.D. Georgia School of Eclectic Medicine and Surgery, Atlanta, 1894, died at his home in Clay City, Ind., May 23, after an illness of six weeks, aged 42.

John K. Ruffin, M.D. University of Pennsylvania, Philadelphia, 1857, who had been in feeble health for some time, died suddenly at his home in Wilson, N. C., May 23

William R. Irons, M.D. Jefferson Medical College, Philadelphia, 1890, died at his home in Allegheny, Pa., from pneumonia, May 21, after an illness of four days, aged 42

Asa E. Hoskinson, M.D. Starling Medical College, Columbus, Ohio, 1883, died at his home in Columbus, May 19, from pneumonia, after an illness of two weeks, aged 45.

James I. Lamar, M.D. Medical College of Georgia, Augusta, 1851, died at his home in Deatsville, Ala., May 11, from pneumonia, after an illness of six weeks, aged 73.

John Moffett, M.D. Medical College of Ohio, 1849, several times president of the Rush County Medical Society, died at his home in Rushville, Ind., May 1, aged 81.

Charles Cochran, M.D. Willoughby (Ohio) University, 1843, for many years a resident at Toledo, died, May 25, at the home of his daughter in Los Gatos, Cal., aged 86.

John Nelson McCune, M.D. Cleveland Medical College, 1878, died at his home in McKeesport, Pa., May 17, from dropsy, after an illness of four months, aged 52.

James M. Park, M.D. Eclectic Medical Institute, Cincinnati, 1871, of Little Rock, Ark., died suddenly while driving near Scott's Crossing, Ark., May 15, aged 51.

Joseph N. B. Latimer, M.D. College of Physicians and Surgeons, Baltimore, 1879, died at his home near T. B., Prince George's County, Md., May 18, aged 48

Tyson Smith, M.D. Homeopathic Hospital College, Cleveland, 1881, formerly of Newaygo, Mich., died at the Michigan State Hospital, Kalamazoo, May 11, aged 55

Ephraim M. Fine, M.D. Medical College of Ohio, Cincinnati, 1872, died at his home in Veedersburg, Ind., May 17, from paralysis, after a brief illness, aged 59

Joseph T. Moreland, M.D. Chattanooga (Tenn.) Medical College, 1901, of Atlanta, Ga., died at a sanitarium in that city, May 22, after a short illness, aged 56

James E. Hyslup, M.D. University of Maryland, Baltimore, 1900, died at his home in Keller, Va., May 18, from pneumonia, after an illness of six days, aged 27

William L. Funderburg, M.D. Southern Medical College, Atlanta, Ga., 1883, committed suicide, by taking morphin at his home in Gadsden, Ala., May 12

Alvin B. Rice, M.D. Bellevue Hospital Medical College, New York, 1867, died suddenly from heart disease, at his home in Jamestown, N. Y., May 7, aged 61.

A. M. Gontner, M.D. Jefferson Medical College, 1878, of York, Pa., died at the York Hospital, May 17, from septicemia, due to an abscess of the foot, aged 47.

Carl Steiger, M.D. University of Munich, Germany, 1887, died at his home in Monroe, Wis., May 7, from toxemia, after an illness of four days, aged 42

Clifford J. Hickman, M.D. Eclectic Medical Institute, Cincinnati, 1889, died at his home in South Bend, Ind., May 8, after an illness of one week, aged 35

Edgar T. Schmidt, M.D. Jefferson Medical College, Philadelphia, 1876, died suddenly in his office in St. Paul, Minn., from heart disease, May 17, aged 48

Robert M. Enders, M.D. Tulane University, New Orleans, 1869, captain and assistant surgeon, U. S. V., died in Manila, P. I., May 26, from nephritis

James T. Warnock, M.D. Jefferson Medical College, Philadelphia, 1858, died suddenly from heart disease, May 9, at his home in Atlanta, Ga., aged 68

Raymond W. Shattuck, M.D. College of Physicians and Surgeons, New York, 1897, school inspector, died at his home in New York, April 27, aged 29.

John J. Healy, M.D. University of Pennsylvania, Philadelphia, 1872, died suddenly from heart disease at his home in Philadelphia, May 7, aged 53.

Robert B. McCants, M.D. Southern Medical College, Atlanta, Ga., 1882, died at his home in Demopolis, Ala., May 28, after an illness of two days, aged 45.

Andrew J. Sauer, M.D. Baltimore Medical College, 1894, died at his home in Baltimore, May 20, from typhoid fever, after an illness of 33 days, aged 30.

Silas E. Farnsworth, M.D. University of Vermont, Burlington, 1867, died at his home in Minneapolis, May 21, from chronic nephritis, aged 65.

William L. Kirkpatrick, M.D. Medical College of the State of South Carolina, Charleston, 1850, died at his home in Anniston, Ala., May 3, aged 76.

John F. Cronin, M.D. Medical College of Georgia, Augusta, 1890, of Augusta and New York City, died from tuberculosis at Daytona, Fla., May 23

E. P. Stearns, M.D. Eclectic Medical Institute, Cincinnati, 1858, assistant surgeon in the Civil War, died recently at his home in Newton, Kan.

Ralph Morden, M.D. New York Homeopathic Medical College, 1875, died at his home in Circleville, Ohio, from Bright's disease, May 12, aged 50

William G. Mott, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878, died at his home in Basco, Ill., from smallpox, May 5, aged 60.

Robert L. Browning, M.D. Eclectic Medical Institute, Cincinnati, 1882, died suddenly from apoplexy at his home in Judsonia, Ark., May 6.

Edward M. Kanouse, M.D. Hahnemann Medical College, Chicago, 1880, of Wausau, Wis., died at Three Rivers, Wis., May 25, aged 60.

James F. Rawlings, M.D. Medical College of Ohio, Cincinnati, 1891, died from brain disease at his home in Eldorado, Ill., May 13, aged 34.

Joseph A. Schaeffer, M.D. University of Wooster, Cleveland, 1887, of Ashtabula, Ohio, died in the Cleveland State Hospital, April 30.

Adolph O. Schoeninger, M.D. College of Physicians and Surgeons, Baltimore, 1902, died, May 4, at his home in Newark, N. J., aged 24.

E. W. Dean, M.D. Cleveland Homeopathic Medical College, died from consumption at Colorado Springs, Colo., the first week in May.

Charles T. Hudson, M.D. Tulane University, New Orleans, 1882, died at his home in Yazoo City, Miss., May 21, after a short illness.

Robert M. Cochran, M.D. Medical College of Virginia, Richmond, 1865, died, May 8, at his home in Martin's Station, Ala., aged 62.

John A. Bitting, M.D. Jefferson Medical College, Philadelphia, 1874, died suddenly at his home in Sherman, Texas, May 14, aged 50.

John A. Robinson, M.D. Jefferson Medical College, Philadelphia, 1868, died suddenly at his home in Due West, S. C., May 25.

Frederick E. Baxter, M.D. Bennett Medical College, Chicago, 1883, died at his home in Petersburg, Neb., April 30, from cancer

Samuel H. Thompson, M.D. University of Tennessee, Nashville, 1892, of Arlington, Texas, died, May 20, at Albany, Texas.

Benjamin R. Mosher, M.D. American Medical College, St. Louis, 1891, died at his home in Kinsley, Kan., May 2, aged 73.

John I. Dyer, M.D. National Medical College, Washington, D. C., 1847, died at his home in Washington, May 9, aged 76.

James F. Richards, M.D. College of Physicians and Surgeons, New York, 1859, died recently at his home in Andover, Mass.

Alphonso S. Wilson, M.D. University of Pennsylvania, Philadelphia, 1892, died at his home in Wilkesbarre, May 27.

Abraham Standlee, M.D. American Medical College, Cincinnati, 1857, died at his home in Santa Anna, Texas, May 2.

George W. Noble, M.D. Eclectic Medical Institute, Cincinnati, 1854, died at his home in Edon, Ohio, May 4, aged 80.

Frederick A. Krill, M.D. Homeopathic Hospital College, Cleveland, 1882, died recently at San Luis Obispo, Cal.

Edmund B. Myers, M.D., Pennsylvania, died suddenly at his home in York, Pa., from apoplexy, May 13, aged 73.

Henry M. Beer, M.D. Cleveland Medical College, 1868, died at his home in Valparaiso, Ind., May 26, aged 65

J. H. Bryant, M.D. College of Medicine and Surgery, Philadelphia, 1849, died at Waterloo, Iowa, April 27.

B. Frank Klugh, M.D. of Florin, Pa., was injured in a railway accident, May 13, and died, May 16, aged 61.

J. F. Couch, M.D., a pioneer of Upshur County, Texas, died at his home in Simpsonville, May 7, aged 85.

Thomas H. Rye, M.D. University of Nashville, 1859, died at his home in Turbine, Tenn., May 26, aged 74.

Charles H. Blair, M.D. Bennett Medical College, Chicago, 1895, died at Beloit, Wis., May 17, aged 46.

Houston D. Shrader, M.D., Washington, D. C., died at Sibley Memorial Hospital, May 21, aged 52.

Isaiah Bowers, M.D., died from dropsy, April 28, at his home in Plymouth, Ind., aged 70.

James D. Donnelly, M.D. died at his home in Mountain City, Tenn., May 21, aged 75.

B. A. Tinsley, M.D., died at his home in Lawrenceburg, Tenn., May 11.

Book Notices.

A Text-Book of Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania, etc. Fourth Edition, Revised, Enlarged, and Entirely Reset. With 280 Text-Illustrations and 6 Chromo-lithographic Plates. Cloth. Pp. 773. Price, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1903.

De Schweinitz's well-known work on diseases of the eye appears in the fourth edition with numerous changes and additions bringing it well up to date. Much new matter has been added and certain chapters, such as those on refractions, movements of the eyeballs and others, have been considerably rewritten. The work will retain the favor which it has received from the profession.

Therapeutics of Dry Hot Air. By Clarence Edward Skinner, M.D., LL.D., New Haven, Conn., Professor of Thermotherapy in the New York School of Physical Therapeutics. Cloth. Pp. 200. Price, $2.00. New York: A. L. Chatterton & Co.

The subject of this work is one that is likely to interest the practitioner more in the future than it has in the past, for the method advocated seems to have advantages and to have acquired at least a standing in therapeutics. The book gives the best side of the treatment, not, however, without mentioning its limitations. The criticism of the book that we should make is first of all that it does not with sufficient completeness and definiteness describe the mechanism of the apparatus. The illustrations given convey a general idea of its appearance and to a certain extent of its mode of working, but on looking over the work we have been unable to find anything as to the possibilities of its utilization in private practice at the bedside in the absence of gas jets, even indeed if it is practicable where they are available.

Anatomy and Histology of the Mouth and Teeth. By I. Norman Broomell, D.D.S., Professor of Dental Anatomy, Dental Histology, and Prosthetic Technics in the Pennsylvania College of Dental Surgery, Philadelphia. Second Edition, Revised and Enlarged, with 337 Illustrations. Cloth. Pp. 500. Price, $4.50 net. Philadelphia: P. Blakiston's Son & Co. 1902.

This is a text-book for dental students, and is thoroughly up to date. The illustrations include microphotographs from actual specimens as well as photographs of dissections. The author enters into a general description of the mouth and surrounding tissues. The occlusion of the teeth receives considerable attention, although that in itself is of minor importance, since the etiology of occlusion is entirely neglected, the manner and arrangement of the teeth in the line of evolution and atavism being an essential point. About one hundred and fifty pages are devoted almost entirely to the anatomy of the teeth. The histology of the structures of the mouth are entered into at considerable length. This work would be of more value if the first part had been devoted to the evolution of the pulps and the teeth. The evolution of the face, jaws and teeth should be well fixed in the mind of the student before he undertakes the study of the present condition of man, as nearly all diseases which the dentist is called on to treat are the result of evolution. The work as a whole is a commendable one. In one or two instances, the author has failed to give credit for illustrations. This, however, was no doubt an oversight. The work is finely produced with clear large type, and is well indexed.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, Other Than Drug Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College. Volume V. Prophylaxis—Personal Hygiene—Civic Hygiene—Care of the Sick. By Joseph McFarland, M.D., Henry Leffmann, M.D., Albert Abrams, A.M., M.D., and W. Wayne Babcock, M.D. Illustrated. Cloth. Pp. 539. Price, $27.50 per set. Philadelphia: P. Blakiston's Son & Co. 1903.

Part 1, by Drs. McFarland and Babcock, discusses the origin and prevention of disease, considering the intrinsic factors which tend to increase or decrease the tendency to disease, such as age, race, heredity, etc. The extrinsic causes are similarly treated under the heads of physical, toxic and sociologic causes, in which a great deal of space is given, profitably, to the different forms of animal and vegetable parasites. Part 2, by Dr. Leffmann, treats of civic hygiene, including chapters on hospitals for contagious diseases, the control of venereal disease, the regulation of water, milk and food supply, the disposal of waste material and the disposal of the dead by burial and cremation. Part 3, by Dr. Abrams, includes such important topics as the hygiene of dwellings; the hygiene of travel; personal hygiene; the hygiene of special periods, beginning with infancy; the hygiene of the diatheses as scrofula, rachitis, scorbutus, etc. The last two chapters are devoted to the care of the sick room and the patient, including a chapter on special nursing. The book includes many helpful suggestions which should be in the possession of every active practitioner. This volume keeps up the reputation of this series in the treatment of subjects in a practical manner.

Association News.

New Members.

New members for the month of May, 1903:

ALABAMA.

Williamson, J. L., Tuscaloosa.
Faulk, W. M., Tuscaloosa.
Camp, E. T., Gadsden.
LeGrande, J. C., Birmingham.
Sellers, H. G., Birmingham.
Whaley, Lewis, Birmingham.
Andrews, Glen, Montgomery.
Dupree, W. J., Athens.
Furniss, H. D., Selma.
Gaston, J. L., Montgomery.
Hamrick, R. H., Pratt City.
Hand, S. P., Demopolis.
Hicks, L. O., Jackson.
Knowlton, J. W., Paint Rock.
Mohr, C. A., Mobile.
McWhorter, H. P., Collinsville.
Mershon, Clarence L., Fairhope.
Marlette, C. E., Hayneville.
Robinson, T. F., Bessemer.
Schowalter, V. McR., Point Clear.
Wharton, W. W., Cullman.
Wright, W. I., Dawson.
Woodcock, Burgett, Vinegar Bend.
Parker, E. T., Brewton.
Somerville, W. G., Tuscaloosa.
Lacey, E. P., Bessemer.

ARKANSAS.

Minor, J. C., Hot Springs.
Collings, H. P., Hot Springs.
Thompson, M. G., Hot Springs.
Clegy, J. T., Siloam Springs.
Hurley, C. E., Bentonville.
Lutterloh, C. M., Jonesboro.
Thompson, R. C., Pine Bluff.
White, J. A., Dumas.
Westerfield, J. H., Atkins.
Wells, D. D., Hazen.
Burton, O. H., Hot Springs.
McCollum, I. N., Greenbrier.

CALIFORNIA.

Adams, F. L., Oakland.
Lazard, E. M., Los Angeles.
Paul, J. W., Santa Clara.
Schmitt, Lionel S., San Francisco.
Crabtree, Hezediah T., San Francisco.
Bailly, T. E., San Francisco.
Stafford, O. R., Santa Ynez.

CONNECTICUT.

Burroughs, Geo. McC., Madison.
Segur, Gideon C., Hartford.
Moriarty, Jas. L., Waterbury.
Kilmartin, Thos. J., Waterbury.

DISTRICT OF COLUMBIA.

Brown, H. L., Washington.
Sutton, Richard L., Washington.
Wilkinson, Oscar, Washington.

FLORIDA.

Thomason, Frank G., Kissimmee.

GEORGIA.

Miller, B. E., Daisy.
Hendricks, W. H., Tifton.
Alexander, W. H., Blakely.

ILLINOIS.

Waters, O. J., Chicago.
Smyth, J. P., Chicago.
Hardon, Robt. W., Chicago.
Duff, Guy C., Chicago.
Bartlett, Rufus H., Chicago.
Simpson, Elmer E., Chicago.
Harris, Frederick G., Chicago.
Alcorn, Archibald J., Chicago.
Dohrmann, Geo., Chicago.
Goldsmith, A. A., Chicago.
Doane, P. S., Chicago.
Gottschalk, F. B., Chicago.
Gray, Ethan A., Chicago.
Darling, C. G., Chicago.
Aiken, A. W., Chicago.
Albro, Merlin Z., Chicago.
Hopkins, Caroline B., Chicago.
O'Byrne, Chas. C., Chicago.
Masilko, V. F., Chicago.
Keyes, A. Belcham, Chicago.
Voyles, Chas. F., Murdock.
Pearson, Jas. J., Pontiac.
Hardesty, T. O., Kampsville.
Franing, E. C., Galesburg.
Dicks, T. A., Broadlands.
Baysinger, M. M., Grand Tower.
Hanna, Robt. A., Peoria.
Berry, R. D., Springfield.
Mitchell, H. C., Carbondale.
Foley, John C., Waukegan.
Davidson, W. P., Sullivan.
Davis, C. E., Peoria.
Smith, Isaac Newton, Toluca.
Smith, D. G., Elizabeth.
See, Clarence S., Pleasant Mound.
Denny, Alden Ray, Galesburg.
Galbraith, Robt. G., Matteson.
Taylor, Leonard S., Elgin.

INDIANA.

Thompson, G. W., Winimac.
McKinney, J. W., Bluffton.
McDonald, W. B., New Augusta.

Hoover, P. N., Boonville.
Hershey, K. C., Carmel.
Cummings, David J., Brownstown.
Morrison, Frank A., Indianapolis.
Patton-Hawkins, Madge, Terre Haute.
Durham, Chas. O., Indianapolis.
Crockett, Lillian A., Indianapolis.
Lawson, W. T., Danville.
Frick, H. C., Evansville.
Clark, Edmund D., Indianapolis.

INDIAN TERRITORY.

Ross, S. P., Savannah.

IOWA.

Brink, H. J., Doon.
Powers, J. C., Hampton.
Hostetler, Calvin, Marcus.
Evans, R., Ft. Dodge.
Stevens, E. Luther, Des Moines.

KANSAS.

Chilcott, B. F., Osborne.
Hausman, Jacob L., Marysville.
McVey, Wm. E., Topeka.
Andrews, A. S., Topeka.
Williams, Wm., Pittsburg.
Williams, G. W., Pittsburg.

KENTUCKY.

Boggs, Jas. P., Robbins
Combs, Glenmore, Winchester.
Prewitt, Nelson V., Winchester.
Dunn, J. T., Louisville.
Thomas, F. P., Hopkinsville.
Hedin, Ernest Lee, Louisville.
Finley, Thos. R., St. Charles.
Hayden, John V., Salem
Jackson, J. B., Hopkinsville.
Warren, Manley C., Buchanan.
Woodard, Robt. L., Hopkinsville.
Berry, W. T., Oakton.
Beard, Frank M., Shelbyville.
Cissell, Jos. K., Loretto.
Carson, Jas. O., Bowling Green.
Davenport, Edw., Hampton.
Dempster, R. T., Glendeane.
Hocker, Robt. T., Arlington.
LaRue, F. G., Smithland.

LOUISIANA.

Williams, W. T., Natchitoches.
Wilkins, H. F., Rayville.
Tolson, F. R., Lafayette.
Tircuit, A., Anchor.
Thompson, E., Ville Platte.
Sartor, D. R., Alto.
Sitman, C. M., Greensburg.
Simmons, C. D., Baton Rouge.
Smith, Ernest H., Lacour.
Powers, E. O., Grangeville.
Pierson, Clarence, Alexandria.
Postell, L. T., Plaquemine.
Matthews, W. W., Cheval.
McCaleb, J. H., Merrick.
Longino, Luther, Minden.
Lehmann, Victor, Hahnville.
Lawrence, Walter S., Yellow Pine.
Littell, B. A., Opelousas.
Jones, P. H., Lutcher.
Jones, Geo. M., Lutcher.
Kimball, John L., Caspiana.
Irion, C. H., Benton.
Huckabay, G. M., Vivian.
Hadra, Frederick, Ft. St. Philip.
Heard, Jas. Preston, Gueydan.
Holloway, Eugene, Plaquemine.
Hargrove, J. B., Natchitoches.
Gaines, G. W., Milliken's Bend.
Grace, W. L., Plaquemine.
Ellis, J. H., Kentwood.
Duchein, C. F., Lecompte.
Cushman, M. R., Abbeville.
Carruth, E. McG., New Roads.
Colvin, S. L., Minden.
Cannon, G. E., Jonesboro.
Biener, Geo., Port Allen.
Bush, A. R., Sligo.
Allen, J. C., Baton Rouge.
Bascom, Henry, Gueydan.
Walmsley, R. W., New Orleans.
Thiberge, N. F., New Orleans.
Sauter, C. F., New Orleans.
Schmittle, Jos., New Orleans.
Seay, R. W., New Orleans.
Richardson, T. F., New Orleans.
Robin, E. A., New Orleans.
Rudolf, T. R., New Orleans.
Patton, G. F., New Orleans.
Newman, J. W., New Orleans.
Mayer, A. J., New Orleans.
Lowe, E. P., New Orleans.
Loeber, Fred, New Orleans.
Lewis, H. S., New Orleans.
Ledoux, Alexander, New Orleans.
Kelly, Hugh, New Orleans.
Granger, Amedie, New Orleans.
Formento, Felix, New Orleans.
Danna, Jos. A., New Orleans.
Catalano, W., New Orleans.
Bayon, H., New Orleans.
Abbott, Louis Lee, New Orleans.
Surghnor, Graham, Monroe.
Roussel, W. D., Patterson.
Wilson, J. L., Alexandria.
Williams, R. L., New Orleans.
Singletary, T. P., Baton Rouge.
Stone, Russell E., Amite City.
Scott, Jos. T., New Orleans.
Riche, H. Guy, Devall.
Maylie, A. G., New Orleans.
Logan, G. King, New Orleans.
King, Henry Allen, New Iberia.
Hopkins, Ralph, New Orleans.
Hunter, J. L., New Orleans.
Hart, J. B., New Orleans
Fossier, A. E., New Orleans.
Duggan, T. A., New Orleans.
DePorter, L., New Orleans.
Dempsey, J. G., New Orleans.
Chamberlain, L. C., New Orleans.
Archinard, J. J., New Orleans.
Batchelor, J. M., New Orleans.
Nothacker, Wm., New Orleans.
Archinard, L. D., New Orleans.
Robin, W. H., New Orleans.
Hackett, R. K., New Orleans.
Ernst, O. F., New Orleans.
Charbonnet, L. S., New Orleans.
Couret, Maurice, New Orleans.
Gelbke, Chas. F., Gretna.
Girard, F. E., Lafayette.
Barrow, A. F., St. Francisville.
Houston, E. L., Koran.
Thompson, F. M., Slaughter.
Peters, J. J., Winnfield.
Davies, Edw., Mansfield.

MARYLAND.

Hirshberg, L. K., Baltimore.
Zepp, Jas. A., Baltimore.
Walles, H. S., Cumberland.
Bevan, Chas. F., Baltimore.

MASSACHUSETTS.

Allen, Horatio C., New Bedford.
Hills, Chas. E., South Natick.

MICHIGAN.

Brooks, Harriet V. Bills, Saginaw.
Cameron, Duncan A., Alpena.
Gillam, Arthur C., Escanaba.
Martin, Jas. B., Traverse City.
Irvine, Geo. W., Detroit.
MacNaughton, Peter D., Calumet.
Jamieson, Robt. A., Detroit.
Schorr, Robt. L., Detroit.
Kirker, Geo. A., Detroit.
Acker, Wm. F., Monroe.
Fenelon, M. P., Escanaba.
Kitchen, A. S., Rapid River.
McGregor, Robt. N., Saginaw.
Moon, Wm. E., Traverse City.
Rees, Geo. M., Calumet.

MINNESOTA.

Ringnell, Carl John, Minneapolis.
Stuhr, Henry C., Argyle.
Graham, Christopher, Rochester.
Woodard, F. R., Minneapolis.

MISSISSIPPI.

Howard, W. L., Kosciusko.
Bolton, W. T., Biloxi.
Davis, W. V., Booneville.
Donald, J. D., Hattiesburg.
Noblin, W. E., Yazoo City.
Seale, J. E., Meridian.
Smythe, J. D., Greenville.
Scott, Jr., Z. J., Winona.
Lucas, J. W., Moorehead.
Beekman, Philip, Natchez.
Barber, T. A., Meridian.
Bass, C. C., Columbia.
Beacham, Woodard D., Felder.
Flowers, E. W., McComb.
Haralson, J. J., Forest.
Hunter, G. S., Bolton.
Mohler, D. G., Mt. Olive.
Murry, Chas. Miller, Ripley.
Pou, Jas. G., Courtland.
Turner, Osborn M., Jackson.
Thompson, Robt. W., Lumberton.
Wymer, J. J., Biloxi.

MISSOURI.

Ellis, Adam D., Powersville.
Harnisch, Henry J., St. Louis.
Vogt, Wm. H., St. Louis.
Goodwin, E. J., St. Louis.
Knott, Jr., Isaiah, Kytesville.
Cadwallader, I. H., St. Louis.
Friedman, Jacob, St. Louis.
Long, J. M., St. Louis.
Miller, J. M., Montrose.

NEW MEXICO.

Bradley, Chas. H., Las Vegas.

NEW YORK.

Hoffman, Chas. Fisher, Bolivar.
Brownell, Mary Alice, Newark.
Baker, Sara Josephine, New York.
Kammerer, Fred, New York.
Laighton, Florence Marion, New York.
Kimball, Chas. C., Watertown.
Robinovitch, Louise G., Watertown.
Warnecke, Anna, Newark.
Slawson, John C., Nyack.
Rogers, Willard H., New York.
Ehlers, Edw. C., New York.
Barnesby, Norman, New York.
Clayton, Mary, Ogdensburg.
Knapp, Hiram L., Newark Valley.
Blair, A. McN., Buffalo.

NORTH CAROLINA.

Boddin, N. P., Durham.
Reed, G. W., Biltmore.
Register, E. C., Charlotte

OHIO.

Tuckerman, J. E., Cleveland
Dennis, Chas. D., Columbus
Campbell, A. D., Cleveland.
Post, Silas R., Canton.
Hatcher, H. H., Dayton
Stewart, C. E., Toledo
Shields, Percy, Cincinnati.
Melchers, Edward, Toledo.
Henry, Frank R., Dayton.
Corey, Martha D., Marion.

PENNSYLVANIA.

Skinner, W. F., Chambersburg.
Milnor, Mahlon T., Warrensville.
Frederick, W., Elliott.
Campbell, Chas. L., Sheradenville
Buehler, W. S., Wernersville
Pringle, W. N., Johnstown.
Mayer, L.-H., Johnstown.
Hechelman, Herman W., Allegheny.
Hoffman, J. Louis, Ashland.
Freudenberger, Katrina, Tamaqua.
Bray, H. A., Philadelphia.
Smith, Lewis Watson, Pittsburg.

SOUTH CAROLINA.

McConnell, Henry E., Chester
Monsen, M. B., Luray.
Hamilton, J. H., Union.
Hines, Edgar A., Seneca.

TENNESSEE.

Roberts, Deering J., Nashville.
Jacobsohn, Hiram B., Memphis.
Sewell, J. A., Rockwood.
Rawlins, Jas. S., Dancyville.
Kinsey, L. E., Ducktown.
Henderson, R. G., Memphis.
Crooks, Jere Lawrence, Jackson.
Black, Wm. T., Memphis.
Burch, L. E., Nashville.
Rogers, H. A., Ducktown.
Powell, Jas. L., Friendship.
Leake, R. M., Collierville.
Kinsey, Fred M., Ducktown.
Hanna, J. H., Covington.
Carroll, Jas. R., Henderson.
Rogers, W. B., Memphis.
Sanders, John F., Friendship.
Tinsley, P. A., Dandridge.
Jacobs, Arthur G., Memphis.
Worthington, Nathan J., Memphis.
Henderson, S. A., Bells.
Nichol, Adam Gillespie, Nashville.
Mathews, W. J., Johnson City.
Marr, Harrington, Nashville.
Wolff, H. S., Memphis.
Mooney, Chas. F., Knoxville.
Miller, Thos. F., Memphis.
Bryan, W. A., Nashville.
Maury, J. M., Memphis.
McNeil, E. K., Jackson.

TEXAS.

Smith, Allen J., Galveston.
Smith, O., Cumby.
Person, A. G., Snyder.
Nowlin, Bethel, Jonah.
Mason, Chas. F., Ft. Sam Houston.
Morris, Robt. S., Houston.
Renbrook, J. T., Rockwall.
Luter, Wm. E., San Antonio.
Cary, Edward Henry, Dallas.
Blount, Jr., E. A., Dallas.
Walker, A. C., Ft. Worth.
Lankford, J. S., San Antonio.
Harrell, T. M., Round Rock.
Chilton, W. E., Ft. Worth.

UTAH.

Kiehle, F. A., West Jordan.

VERMONT.

Pease, C. A., Burlington.

VIRGINIA.

Turner, Wm. D., Fergusson's Wharf.

WASHINGTON.

Shaw, E. E., Walla Walla.

WEST VIRGINIA.

Thomas, F. S., Charleston.
Preston, B. S., Pratt.
Pritchard, T. J., Huntington.

WISCONSIN.

Reeve, Jas. S., Appleton.
Roberts, John A., Manitowoc.
Harrington, T. L., Milwaukee.

HAWAII.

Schallie, Wm. A., Pohala.

State Boards of Registration.

California.—The Board of Medical Examiners of the State of California met in San Francisco, April 7 to 8, 1903, and examined in 9 subjects, with 90 questions, 40 candidates, of whom 26 passed, 12 failed and 2 were conditioned. The examination was written and the percentage required was 75.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
250	R.	University of Pennsylvania	1902	84 2-9
258	R.	Univ. Med. Coll., Kansas City	1902	82 1-9
266	R.	University of Cincinnati	1899	87 2-3
282	H.	University of Boston	1889	90 8-9
286	R.	University of Michigan	1896	79 5-9
289	R.	University of Michigan	1895	82 2-9
251	R.	Med. Dept. Univ. of California	1902	90
255	R.	Med. Dept. Univ. of New York	1879	80 5-9
252	R.	Medico-Chirurgical Coll., Phila	1902	75 4 9
254	R.	College of P. and S., Chicago	1902	82 2-3
265	R.	Coll. of Phys. and Surgs., New York	1880	83 5-9
284	R.	Coll. of P. and S., San Francisco ..	1902	88 2-9
259	R.	Rush Medical College, Chicago	1884	80
260	R.	Fort Wayne Coll. of Med., Indiana.	1897	85 1-3
261	R.	Vanderbilt University, Tennessee ..	1902	85 8-9
264	R.	Missouri Medical College	1887	75
267	H.	Hahnemann Hosp. Coll., San Fran.	1901	87
268	R.	Frederick William U., Berlin, Ger ..	1899	78 5-9
269	R.	Howard Med. Coll., Dist. of Col	1902	81 5-9
272	R.	McGill University, Montreal	1890	88 2-3
279	R.	Columbia University, New York	1884	*
274	R.	Royal Coll. of Surgs., London	1896	90 2-3
276	R.	Ohio Medical University	1893	85
281	R.	Woman's Medical Coll., Cincinnati.	1895	85
285	H.	Homeopathic Medical Coll., Chicago	1888	76 8-9
288	H.	Hahn. M. C. of Pacific, San Fran ..	1902	78 8-9

* Previously conditioned in anatomy and pathology.

CONDITIONED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
263	H.	Hahnemann Med. Coll., Chicago ...	1884	†75 1-9
278	H.	Hahnemann Med. Coll., Chicago ...	1902	‡75 5-9

† Conditioned in physiology.
‡ Conditioned in physiology and pathology.

FAILED.

253	R.	Cleveland Medical College, Ohio...	1892	51 2-3
256	R.	Royal University, Parma, Italy....	1900	71
257	R.	Washington University, Missouri...	1895	60 7-9
262	R.	Barnes Medical College, St. Louis..	1898	68 7-9
270	R.	University Med. Coll., New York...	1879	31 2-9
275	R.	University of Michigan..........	1902	59 5-9
287	R.	Univ. of the South, Tennessee.....	1901	65 1-9
271	R.	Bellevue Hosp. M. Coll., New York.	1887	22 2-9
273	R.	Coll. of Phys. and Surgs., Baltimore	1892	69 1-9
277	R.	Faculty of Paris, France..........	1891	67 5-9
280	R.	Royal University of Pisa, Italy....	1899	66 1-9
283	E.	Eclectic Med. Inst., Cincinnati....	1894	62 2-9

Illinois January Report.—Dr. J. A. Egan, secretary, Springfield, reports the examination held by the Illinois State Board of Health in Chicago, Jan. 15, 16 and 17, 1903, as follows: Number of subjects examined in, 11; total questions, 110; percentage required to pass, 75; written examination; total examined, 48; passed, 43; failed, 5.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent
1567	R.	College of Phys. and Surgs., Chicago..	1903	85
1569	R.	College of Phys. and Surgs., Chicago..	1903	83
1575	R.	College of Phys. and Surgs., Chicago..	1903	77
1580	R.	College of Phys. and Surgs., Chicago..	1903	82
1581	R.	College of Phys. and Surgs., Chicago..	1902	84
1583	R.	College of Phys. and Surgs., Chicago..	1903	80
1586	R.	College of Phys. and Surgs., Chicago..	1901	89
1587	R.	College of Phys. and Surgs., Chicago..	1903	86
1590	R.	College of Phys. and Surgs., Chicago..	1902	91
1593	R.	College of Phys. and Surgs., Chicago..	1902	85
1602	R.	College of Phys. and Surgs., Chicago..	1903	88
1608	R.	College of Phys. and Surgs., Chicago..	1903	90
1609	R.	College of Phys. and Surgs., Chicago..	1903	88
1610	R.	College of Phys. and Surgs., Chicago..	1903	84
1597	R.	College of Phys. and Surgs., Chicago..	1903	84
1598	R.	College of Phys. and Surgs., Chicago..	1903	87
1612	R.	College of Phys. and Surgs., Chicago..	1903	87
1578	R.	College of Phys. and Surgs., Chicago..	1903	87
1568	R.	Rush Medical College................	1902	89
1579	R.	Rush Medical College................	1903	87
1582	R.	Rush Medical College................	1903	88
1585	R.	Rush Medical College................	1903	84
1588	R.	Rush Medical College................	1902	89
1595	R.	Rush Medical College................	1902	89
1600	R.	Rush Medical College................	1903	85
1605	R.	Rush Medical College................	1900	91
1570	R.	N.-W. Univ. Woman's M. Coll., Chicago	1901	86
1574	R.	Northwestern University, Chicago.....	1902	85
1577	R.	Northwestern University, Chicago.....	1902	91
1571	H.	Hahnemann Medical College, Chicago..	1903	81
1573	H.	Hahnemann Medical College, Chicago..	1901	85
1596	H.	Hahnemann Medical College, Chicago..	1902	81
1572	R.	Jefferson Medical College, Philadelphia.	1902	87
1584	R.	National Medical University, Chicago..	1902	82
1589	R.	University of Michigan..............	1899	87
1594	R.	University of Athens, Greece.........	1899	77
1599	R.	University of Vienna, Austria........	1901	86
1603	R.	University of Prague, Austria........	1896	87
1613	R.	University of Leipzig, Germany.......	1902	84
1601	R.	Woman's Medical College, Baltimore...	1896	83
1606	R.	Laval University, Montreal..........	1896	83
1607	R.	Baltimore Medical College, Baltimore..	1889	82
1611	R.	Harvey Medical College, Chicago......	1902	86

FAILED.

1566	R.	College of Phys. and Surgs., Chicago..	1902	63
1575	R.	Barnes Medical College, St. Louis.....	1902	69
1592	R.	Barnes Medical College, St. Louis.....	1901	53
1591	R.	Keokuk Med., Coll. Phys. and Surgs...	1902	73
1604	R.	National Medical University, Chicago..	1902	67

Utah Report.—Dr. R. W. Fisher, secretary, reports as follows for the Utah State Board of Medical Examiners: Examination held at Salt Lake City, April 6 and 7, 1903; subjects, 10; questions, 80; percentage required, 75; written examination; examined, 13; passed, 12; failed, 1:

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
1	R.	Rush Medical College..............	1902	87.4
6	R.	Rush Medical College..............	1903	85.9
7	R.	Rush Medical College..............	1903	86.7
8	R.	Rush Medical College..............	1903	88.7
9	R.	Rush Medical College..............	1903	88.1
2	R.	College of Phys. and Surgs., Chicago	1898	87.1
10	R.	College Phys. and Surgs., N. Y. City.	1884	82.3
3	H.	Hahnemann Med. Coll. of the Pacific	1902	82.3
4	R.	Phys. and Surgs., Dublin, Ireland...	1883	82.3
5	R.	University of Virginia............	1895	85.9
11	R.	Omaha Medical College............	1901	79.6
12	R.	Gross Medical College, Denver......	1902	80.8

FAILED.

1	R.	St. Louis College of Phys. and Surgs.	....	*47.7

* Third examination.

Connecticut Report.—Dr. C. A. Lindsley, secretary of the State Board of Health, reports that the examining committee of the Connecticut Medical Society, at three different sessions during the year 1902, at New Haven, gave written examinations in 10 subjects, with 100 questions, and required a percentage of 75. The total number examined was 76, of whom 66 passed and 10 failed. In the absence of the percentages usually given in these columns, we give below a summary:

No.	Sch. of Pract.	College.	Found Qual.	Not Qual.
1	R.	Medical College of Alabama..........	..	1
16	R.	Yale University	16	.
5	R.	Baltimore Medical College..........	3	2
2	R.	Johns Hopkins	2	.
3	R.	Tufts Medical College..............	2	1
1	R.	Harvard University	1	.
1	R.	Dartmouth Medical College..........	1	.
1	R.	University of Minnesota............	1	.
1	R.	University of New York............	1	.
1	R.	University of Louisville............	1	.
3	R.	University of Pennsylvania..........	3	.
5	R.	University of Vermont..............	5	.
1	R.	University of the South............	..	1
6	R.	Bellevue Hosp. Med. Coll., New York..	6	.
11	R.	College of Phys. and Surgs., New York.	11	.
1	R.	College of Phys. and Surgs., Chicago..	1	.
1	R.	College of Medicine, Syracuse.........	1	.
1	R.	Cornell University	1	.
2	R.	Long Island College of Medicine......	1	1
2	R.	Starling Medical College............	..	2
3	R.	Medico-Chirurgical, Pennsylvania	2	1
2	R.	Woman's Medical College, Pennsylvania	2	.
3	R.	Jefferson Medical College, Philadelphia	3	.
1	R.	Gross Medical College..............	1	.
1	R.	McGill University	1	.

He further reports that the committee of the Connecticut Homeopathic Medical Society likewise held three different sessions in the year 1902, at Hartford, with the same number of subjects and questions and percentage required, at which the number examined was 6; passed 5, and failed 1, as follows:

No.	Sch. of Pract.	College.	Found Qual.	Not Qual.
1	R.	Trinity Medical College, Toronto......	..	1
2	H.	Boston University School of Medicine.	1	1
1	H.	New York Homeopathic College.......	1	.
3	H.	Hahnemann Med. Coll., Philadelphia..	3	.

The committee of the Connecticut Eclectic Medical Association made no examinations during the year.

Medical Organization.

Reorganization.

We quote the following from the *Medical Fortnightly:* "It is almost the rule that every community which is large enough to have a medical society, has two, such is the perversity of human nature and so difficult is it for us to agree among ourselves. The fact that there are more than enough local medical societies ready and willing to undertake the responsibility of being made the local gateway to the American Medical Association is one of the most troublesome problems in the way of reorganization. In St. Louis there was no question as to which society would be recognized, the St. Louis Medical Society was so easily the most important and the only society which could be seriously considered; other communities are less fortunate, and considerable feeling is being engendered in the endeavor to decide which of the aspirants shall be selected. That all will be happily settled eventually goes without saying, and there can be no question the results of the reorganization will demonstrate the wisdom of its having been undertaken. To hasten this happy time it is necessary that the members of the various county societies show a generous disposition during the present period; in undertaking to represent the American Medical Association locally a responsibility rests on each society to conform to the requirements of the Association. To let a matter of sex or petty personalities cause the rejection of physicians, who are eligible for membership in the National Association in all points except such local membership, should be sufficient to discredit any society with the state and National organizations. A broad and generous interpretation of the code and an elimination of all considerations which have no definite bearing on the ethical or moral standing of a physician in his community should characterize the attitude of all county societies toward those who desire membership with us; lacking this the days of troubles of reorganization will be long continued.

Harrison County (Iowa) Medical Society.

Physicians of Harrison County, Iowa, met in Logan, May 21, and organized a county medical society, with the following officers: President, Dr. Irving C. Wood, Logan; vice-presidents, Drs. R. V. Witter, Woodbine, and Thomas Macfarlane, Mondamin; secretary, Dr. J. H. Gasson, Missouri Valley, and treasurer, Dr. Joseph Knowles, Logan.

Thayer County (Neb.) Medical Society.

Physicians of Thayer County met at Hebron, April 14, and organized a county medical society, with the following officers: Dr. Joseph V. Hinchman, Hebron, president; Dr. George A. Birdsall, Alexandria, vice-president; Dr. Joseph H. Boyes, Hebron, secretary and treasurer; Drs. Cyrus M. Easton, Hebron, Adam Herney, Deshler, and W. T. Reynolds, Hebron, censors, and Dr. Charles C. Snowden, Davenport, delegate to the state society.

Livingston County (Ill.) Medical Society.

At the annual meeting held in Pontiac, May 14, it was voted that the society affiliate with the Illinois State Medical Society. The following officers were elected: Dr. Thaddeus O. Bannister, Odell, president; Dr. John J. Stites, Pontiac, vice-president; Dr. John Ross, Pontiac, secretary-treasurer; Drs. James W. Mitchell, Pontiac, George T. Carson, Chatsworth, and Emmet E. McCoy, Flanagan, censors, and Dr. John Ross, Pontiac, delegate to the state society.

Bremer County (Iowa) Medical Society.

This society, organized in October last at Tripoli, Iowa, with Dr. Herman C. Jungblut, Tripoli, president, and Dr. Bert C. Dunkelberg, Tripoli, secretary-treasurer, held its third meeting at Waverly, May 27, and adopted the constitution and by-laws proposed by the American Medical Association for county societies. After the meeting a banquet was given in honor of Dr. Oscar Burbank, Waverly, who celebrated his eighty-third birthday the day previous, and who has been in active practice for 55 years.

Wisconsin in Line.

At the meeting of the Wisconsin State Medical Society, held in Milwaukee, June 3 to 5, the constitution and by-laws recommended by the American Medical Association was adopted unanimously, a committee of ten was appointed to act as a council for the coming year and till the state is divided into regular councilor districts and councilors elected. Several county societies have been organized in Wisconsin during the past few months, and the work of organization will now be taken up systematically.

Columbiana County (Ohio) Medical Society.

This society was organized at East Liverpool, May 19, and adopted the constitution and by-laws proposed by the American Medical Association for county societies. The following officers were elected: Dr. William N. Bailey, East Liverpool, president; Dr. Arthur B. Holland, Wellsville, vice-president; Dr. William E. Morris, Lisbon, secretary-treasurer; Dr. Wilbert A. Hobbs, East Liverpool, delegate to the state society, and Dr. James T. Elliott, East Liverpool, alternate, and Drs. William S. McFarland, Wellsville, Arthur C. Yengling, Salem, and William M. Calhoun, East Liverpool, censors.

Societies.

COMING MEETINGS.

Minnesota State Medical Society, St. Paul, June 17.
Medical Association of Montana, Helena, June 17-18.
Medical Society of New Jersey, Asbury Park, June 23-25.

American Medico-Psychological Association.—At the annual meeting in Washington, D. C., May 13, Dr. Alonzo B. Richardson, Washington, was elected president.

American Association of Pathologists and Bacteriologists.—At the meeting in Washington, D. C., May 13, Dr. Eugene Hodenpyl, New York City, was elected president.

Kennebec County (Maine) Medical Association.—At the annual meeting held in Augusta, May 20, Dr. Luther G. Bunker, Waterville, was elected president, and Dr. Wellington Johnson, Augusta, secretary-treasurer.

Thurston County (Wash.) Medical Society.—At the annual meeting, May 25, in Olympia, Dr. George W. Ingham was elected president; Dr. John W. Mowell, secretary, and Dr. W. L. Bridgford, treasurer, all of Olympia.

Utah County (Utah) Medical Society.—At the annual meeting held May 6, Dr. J. Franklin Noyes, American Fork, was elected president; Dr. J. M. Henry, Payson, vice-president; and Dr. David Westwood, Provo, secretary and treasurer.

Arizona Medical Association.—At the annual meeting held in Phoenix, May 27 and 28, Dr. Logan D. Dameron, Phoenix, was elected president, and Dr. John W. Ross, Phoenix, secretary. Tucson was selected as the place of meeting for 1904.

American Neurological Association.—At the annual meeting held in Washington, May 13, Dr. Frank R. Fry, St. Louis, was elected president; Dr. Hugh T. Patrick, Chicago, first vice-president, and Dr. Graeme M. Hammond, New York, secretary and treasurer.

American Laryngological Association.—At the annual meeting in Washington, May 13, Dr. Jacob H. Hartman was elected president, and Dr. James E. Newcomb, New York City, secretary and treasurer. Atlantic City was decided on as the next meeting place.

Tolland County (Conn.) Medical Association.—At the one hundred and eleventh annual meeting held in Hartford, April 23, Dr. Edwin T. Davis, Ellington, was elected president; Dr. William C. Haven, Coventry, vice-president; and Dr. Ernest O. Winship, Rockville, clerk and treasurer.

Southern Medical College Association.—At the annual meeting held in New Orleans, May 5, Dr. Christopher Tompkins, Richmond, Va., was elected president; Dr. George C. Savage, Nashville, Tenn., secretary-treasurer, and Birmingham, Ala., was selected for the meeting-place in 1904.

College of Physicians and Surgeons (Chicago) Alumni Association.—At the annual meeting held in Chicago, May 25, Dr. Charles C. O. Byrne, Chicago, was elected president; Dr. C. A. Stevens, Texarkana, Texas, vice-president, and Dr. James Moreau Brown, Chicago, secretary-treasurer.

American Dermatological Association.—At the meeting in Washington, May 13, Dr. Joseph Zeisler, Chicago, was elected president; Dr. Milton B. Hartzell, Philadelphia, vice-president, and Dr. Charles J. White, Boston, secretary and treasurer. The next meeting will be held in Niagara Falls, N. Y.

Galva District (Ill.) Medical Society.—At the annual meeting held in Galva, May 7, Kewanee was selected as the place for the 1904 meeting. Dr. Harry W. Waterous, Galva, was elected president; Dr. Francis O. Lowe, Kewanee, vice-president, and Dr. H. Nelson Heflin, Kewanee, secretary-treasurer.

American Association of Genito-Urinary Surgeons.—At the annual meeting held in Washington, D. C., May 12 and 13, Dr. Edwin C. Burnett, St. Louis, was elected president; Dr. F. Tilden Brown, New York City, vice-president, and Dr. John Vanderpoel, New York City, secretary and treasurer.

Physicians' Club of Chicago.—The annual meeting was held June 1, at which the following officers were elected: Secretary, Dr. Henry F. Lewis; directors (for two years), Drs. Joseph Zeisler, A. M. Corwin, and Charles P. Small; (holdover), Drs. A. C. Cotton, J. Clarence Webster and John M. Dodson.

Hardeman County (Tenn.) Medical Society.—Dr. M. M. Smith, Cedar Chapel, was elected president; Dr. H. M. Milstead, Crainsville, vice-president, and Dr. Robert W. Tate, Bolivar, secretary-treasurer, at the annual meeting held in Bolivar. Whiteville was selected as the next place of meeting, October 13.

Oklahoma Medical Society.—The eleventh annual meeting was held in Guthrie, May 12. Dr. Abraham L. Blesh, Guthrie, was elected president; Dr. Aarcha K. West, Oklahoma City, vice-president; and Dr. Eugene O. Barker, Guthrie, secretary and treasurer. The next meeting will be held in Oklahoma City, November 11.

American Ophthalmological Association.—At the annual meeting in Washington, May 14, Dr. Charles S. Bull, New York, was elected president; Dr. Arthur Matthewson, Brooklyn, vice-president; Dr. Jonathan S. Prout, Brooklyn, corresponding secretary, and Dr. Samuel B. St. John, Hartford, Conn., recording secretary and treasurer.

American Medical Editors' Association.—At the annual meeting held in New Orleans, May 5, the following officers were elected: Dr. Charles E. De M. Sajous, Philadelphia, president; Drs. Charles Chassaignac, New Orleans, and Otho F. Ball, St. Louis, vice-presidents, and Dr. J. McDonald, Jr., New York City, secretary-treasurer.

Ohio State Pediatric Society.—This society, at its annual meeting held in Dayton, June 2, elected the following officers: President, Dr. Edwin W. Mitchell, Cincinnati; vice-presidents, Drs. Daniel G. Reilly, Dayton, and William W. Pennell, Fredericktown, and secretary-treasurer, Dr. William Clark, Cleveland. During this meeting almost fifty new members were enrolled.

American Orthopedic Association.—At the seventeenth annual meeting held in Washington, May 12, 13 and 14, the following officers were elected: Dr. Reginald H. Sayre, New York City, president; Drs. Joel E. Goldthwaite, Boston, and Gwilym G. Davis, Philadelphia, vice-presidents; Dr. John Ridlon, Chicago, secretary, and Dr. Elliott G. Brackett, Boston, treasurer.

Association of American Physicians.—At the annual meeting in Washington, D. C., May 14, Dr. William T. Councilman, Boston, was elected president; Dr. Edward D. Trudeau, Saranac Lake, N. Y., vice-president; Dr. Solomon Solis-Cohen, Philadelphia, recorder; Dr. Henry Hun, Albany, N. Y., secretary, and Dr. J. P. Crozer Griffith, Philadelphia, treasurer. The next meeting will be held in Washington.

Decatur (Ill.) Medical Society for Macon County.—At the annual meeting held May 26, the following officers were elected: President, Dr. Silas E. McClelland, Decatur; vice-president, Dr. Charles M. Wood, Maroa, and secretary-treasurer, Dr. Lynn M. Barnes, Decatur. The society adopted a new constitution and by-laws which followed very closely those recommended by the American Medical Association.

American Climatological Association.—At the twentieth annual meeting held in Washington, D. C., May 12, 13 and 14, the following officers were elected: Dr. James C. Wilson, Philadelphia, president; Drs. Thomas Darlington, Jr., New York City, and Thomas D. Coleman, Augusta, Ga., vice-presidents, and Dr. Guy Hinsdale, Philadelphia, secretary. The next meeting will be held in Philadelphia, June 2 to 4, 1904.

American Pediatric Society.—At the fifteenth annual meeting held in Washington, D. C., May 12, 13 and 14, the following officers were elected: President, Dr. Augustus Caille, New York City; vice-presidents, Drs. Allen M. Barnes, Toronto, Ont., and Edwin E. Graham, Philadelphia; secretary, Dr. Samuel S. Adams, Washington, D. C.; treasurer, Dr. J. Park West, Bellaire, Ohio, and recorder and editor, Dr. Walter L. Carr, New York City.

Maryland Public Health Association.—At the meeting in Annapolis, June 4 and 5, the subjects discussed were vaccination, disinfectants, consumption, typhoid and malarial fevers, water supply of Baltimore and Annapolis, and health as a state investment. The following were elected officers: President, Dr. Thomas B. Owings, Ellicott City; vice-president, Dr. Frank H. Thompson, Annapolis; secretary, Dr. John S. Fulton, Baltimore, and treasurer, Dr. W. Royal Stokes, Baltimore.

City and County Medical Society (Portland and Multnomah County, Oregon.)—At the annual meeting in Portland, May 22, the following officers were elected: President, Dr. Robert L. Gillespie; vice-president, Dr. R. C. Coffey; treasurer, Dr. Albert E. Mackay; secretary, Dr. Alexander D. Mackenzie; councilors, Drs. James F. Bell, James K. Locke and Joseph A. Pettit; delegates to state society, Drs. Andrew C. Smith, Edward P. Geary, William Jones, and Simeon E. Josephi, all of Portland.

Utah State Medical Society.—The ninth annual meeting was held in Salt Lake City, May 12 to 14. Ogden was selected as the meeting place for 1904, and the following officers were elected: Dr. George W. Baker, Ogden, president; Drs. Frederick Clift, Heber City, and Emerson F. Root, Salt Lake City, vice-presidents; Dr. Walter S. Ellerbeck, Salt Lake City, secretary; Dr. James N. Harrison, Salt Lake City, treasurer, and Dr. Samuel C. Baldwin, Salt Lake City, delegate to the American Medical Association.

American Medical Temperance Association.—At the annual meeting held in New Orleans, May 8, the following officers were re-elected: Dr. Nathan Smith Davis, Chicago, honorary president; Dr. Winfield S. Hall, Chicago, president; Drs. Henry D. Didama, Syracuse, N. Y., T. A. McNicholl, New York City, and Henry O. Marcy, Boston, vice-presidents; Dr. Thomas D. Crothers, Hartford, Conn., secretary; Dr. Charles E. Stewart, Battle Creek, Mich., corresponding secretary, and Dr. George W. Webster, Chicago, treasurer.

American Gastro-Enterological Association.—At the sixth annual meeting held in Washington, May 14, Prof. C. A. Ewald of Berlin was the guest of honor, and a banquet was given him by the association. The following officers were elected: Dr. Samuel J. Meltzer, New York, president; Drs. Fenton B. Turck, Chicago, and William G. Morgan, Washington, D. C., vice-presidents; Dr. Charles D. Aaron, Detroit, secretary-treasurer, and Drs. A. L. Benedict, Buffalo, Max Einhorn, New York City, and Edward Quintard, New York City, councilors.

Medical Society of the State of California.—The thirty-third annual meeting was held in Santa Barbara, April 21 to 23. The legislative body has taken up the constitution and by-laws suggested by the American Medical Association for state societies; has made slight changes necessary to adopt it to local condition, and will present it to the society for action at the next meeting. The following officers were elected: President, Dr. H. Bert Ellis, Los Angeles; vice-presidents, Drs. William H. Flint, Santa Barbara and George A. Hare, Fresno; secretary (permanent) Dr. George H. Evans, San Francisco; assistant secretary, H. P. Hill, San Francisco; board of examiners, Drs. Dudley Tait, San Francisco, Lewis S. Thorpe, Los Angeles, Daniel E. Osborne, St. Helena, Walter S. Thorne, San Francisco, and Samuel H. Buteau, Oakland; alternates on board of examiners, Drs. Clark J. Burnham, San Francisco, Albert W. Kirk, San Francisco, and Francis M. Pottenger, Los Angeles; board of trustees, Drs. Curtis G. Kenyon, Philip M. Jones, Andrew W. Morton and Julius Rosenstirn, San Francisco, George A. Hare, Fresno, Thomas Ross, Sacramento, J. Gordon Baird, Riverside, Charles W. Nutting, Etna Mills, Frank L. Adams, Oakland, and Fitch C. E. Mattison, Pasadena. The society will meet in Paso Robles, April 19 to 21, 1904.

AMERICAN SURGICAL ASSOCIATION.

Meeting held in Washington, May 12 to 14, 1903.

The President, Dr. Maurice H. Richardson, in the Chair.

(Continued from page 1595.)

Mikulicz on Gastrointestinal Surgery.

Prof. John von Mikulicz-Radecki, Breslau, Germany, read a paper on the second day entitled "Some Contributions to the Surgery of the Gastrointestinal Tract," in which he divided the subject into the following topics: 1. Cardiospasm and its treatment. 2. Peptic ulcer of the jejunum. 3. The operative treatment of severe forms of invagination of the intestine. 4. Operation on malignant growths of the large intestine.

He discussed each one at some length. In reference to the first topic, in view of the insufficiency of all therapeutic measures for relief, he advised the following operation:

The stomach is exposed by laparotomy and in the anterior wall is made an incision long enough to allow the entire left hand to pass into the stomach. Under the guidance of the fingers, which are pushed forward toward the cardiac end, an instrument resembling a glove stretcher is introduced into the cardiac orifice. Dilatation is gradually effected to such an extent that the blades of the instrument are about 7 cm. apart. Thus is caused a blunt dilatation of the cardia similar to the dilatation of the sphincter ani in case of anal fissure. Then the wounds in the stomach and in the parietal walls are closed.

As to peptic ulcer of the jejunum, the Professor stated that we are pretty certain about its etiology; it can be explained only by the prolonged presence of gastric juice which reaches the jejunum without having been normally diluted and neutralized by bile and by the pancreatic secretions. He does not believe that surgeons are any longer entitled to perform anterior gastroenterostomy, at least for benign affections of the stomach, but considers that the most rational method is the pyloroplastic operation.

Mr. B. G. A. Moynihan, Leeds, England, read a paper on "The Surgery of the Simple Diseases of the Stomach," in which he stated that the great majority of such cases susceptible to successful treatment by surgical measures are due to ulceration or to its complications and results.

Papers on the Therapeutic Value of the X-Rays in Surgery.

Dr. Arthur Dean Bevan, Chicago, read a paper entitled "The Therapeutic Value of the X-Ray."

Drs. Wm. L. Rodman and G. E. Pfahler read a paper entitled "The Value of the X-Ray in Superficial Epitheliomata and Tuberculosis," with the following conclusions:

1. The length of time required for the cure of epitheliomata is longer than by surgical or caustic treatment, while the cosmetic results are better. The dangers are proportionate to the urgency of the treatment as indicated by the degree of malignancy. It should only be recommended in cases that are inoperable either because of the extent of the growth or its location.

2. It is probably the best means at our command for the treatment of superficial tuberculosis and gives better cosmetic results.

3. It should follow all operations for malignant disease or tuberculosis with the twofold object of stimulating the healing process and of preventing a recurrence. In some cases it may be of advantage to give a short course of treatment before operation to destroy the outlying portions of the growth and make such operation of a less formidable nature.

Dr. William B. Coley, New York, read a paper entitled "Further Observations on the Influence of the Roentgen Ray on Sarcoma," in which he described 36 cases. He felt that, in regard to the relative merits of the toxins and *x* rays in inoperable sarcoma, the time had been too short and experience too limited thus far to definitely decide this question. He did not believe that the *x*-ray method should be employed in operable cases of sarcoma, with the possible exception of carcinoma of the extremities, in which operation would necessitate amputation. In such cases he recommended a brief course of the combined *x*-ray and toxin treatment.

Dr. Alex. B. Johnson, New York, read a paper entitled "Some Experiences in the Treatment of Inoperable Malignant Growths by the X-Ray," in which he reported ten cases, nine of carcinoma and one of sarcoma; eight died under treatment and two are still alive and have apparently improved, one of them being the case of sarcoma. He described the technic.

Hernia.

Dr. William B. Coley, New York, read a paper entitled "Results of 1,000 Operations for the Radical Cure of Inguinal and Femoral Hernia Performed Between 1891 and 1902." Out of the 1,003 cases which the author had operated on between August, 1891, and December, 1902, there were 937 cases of inguinal hernia, 756 of which occurred in males and 181 in females, and 66 cases of femoral hernia, all males. In the 66 cases of femoral hernia there was no mortality and the primary union was obtained in all but one case, which formed the only recurrence, the balance having remained well from six months to eleven years. The Bassini method for femoral hernia was employed in 16 cases, and the purse-string suture (with kangaroo tendon) in 50 cases. Out of the 181 operations on the female for inguinal hernia there was no recurrence and no relapse, the method employed being practically Bassini's method for the male. There was no mortality in the 1,003 cases. In children operation should seldom be advised under 4 years, the reasons being that many of the cases at this age are cured by a truss, but after that age in which a truss has been tried and failed, or cases in which the presence of reducible hydrocele prevents a truss from holding the rupture operation is advised. In all adult cases under the age of 50 years operation is advised unless there are strong contraindications. Between the ages of 50 and 70 years operation is advised in patients in good health in cases in which the rupture is held with difficulty by a truss. Six hundred and fifty of these cases were found well from 1 to 11 years, 708 cases were found well from 6 months to 11 years, and 467 from 2 years to 11 years. A careful résumé of the literature on the subject and a comparison of the results obtained by other operators was given.

Dr. N. P. Dandridge, Cincinnati, reported a case of gangrene of 15 inches of cecum and ileum after an operation for appendicitis, with relief of artificial anus after repeated operations.

Operations in Presence of Albumin, Etc.

Dr. John C. Munro, Boston, read a paper on the third day entitled "The Significance of Albumin and Casts in Surgical Patients," in which he stated that while he believed that there was no doubt that there was danger in operating on a patient whose kidneys are incapable of sufficient elimination and where there are secondary organic changes, because a patient exhibits a small amount of albumin, hyaline and fine granular casts, with renal cells, the conclusion should not be hastily reached that he is not a fit subject for operation; on the other hand, the presence of any of these symptoms should be sufficient to cause a thorough investigation. He reported a series of 500 cases showing albumin and casts in the urine, not including those, however, that showed renal degeneration, glycosuria, genitourinary diseases, burns, erysipelas or similar diseases, most of whom were subjected to ether anesthesia, and in none of them was it noticed that any renal damage was inflicted. Out of the series of 500 cases 63 died, 8 from shock, 2 after operation for general peritonitis, 5 from pneumonia, 3 from tuberculosis, 19 from sepsis or severe peritonitis, 4 from senility, and, in addition, there were deaths from embolism, malignant disease, cardiac disease, skull fractures and pancreatitis, where the rôle of the urinary organs must have been insignificant. Of the 4 cases in which death was ascribed to senility, one with cellulitis of the arm had 0.25 per cent. of albumin and casts, one with intestinal cancer had profuse diarrhea, one had a strangulated hernia and the fourth died one month after fracture of the femur, showing only the slightest possible trace of albumin with hyaline and granular casts.

Digital Compression to Cure Aneurism.

Dr. Francis J. Shepherd, Montreal, Canada, read a paper entitled "The Treatment of Aneurism of the External Iliac Artery by Digital Compression, with Report of a Case," in which he referred to the great dangers of surgical interference with the tumor, making amputation of the extremity preferable in many cases to trying to remove the aneurism. He gave a careful résumé of the literature on the subject. The advantages of digital compression are that no apparatus is necessary, the finger being the sole means by which the artery is controlled above the aneurism. This, of course, requires a number of assistants, and does not usually require to be kept up more than 24 hours, in the case reported the pulsation ceasing at the end of 12 hours. This case occurred in a man 43 years of age, who had strained himself by lifting a heavy weight, and some months afterward a swelling appeared in the left groin, which pulsated, was at first soft and painless but gradually became harder and seemed to grow upward into the abdomen. The patient objected to operation, and it was decided to put him on palliative treatment until the session opened, so that relays of students could be secured. He was put on Tuffnell's treatment, and leeches applied over the tumor, iodid of potassium being given internally and very little fluid. At the end of 12 hours pulsation had entirely ceased, the pain having been severe after the first four or five hours until the end of twelve hours, being controlled by hypodermic injections of morphin. After 12 hours the patient had no excessive pain, but compression was continued in a moderate degree for 12 hours more, when the leg was wrapped in cotton wool and carefully bandaged, he being kept in bed for a couple of weeks more, and six months after the operation, although the tumor could be easily felt, there was no pulsation, and it was very hard.

Strangulated Hernia.

Dr. Leonard Freeman, Denver, read a paper entitled "Strangulated Left Duodenal Hernia, in which the Sac Contained the Entire Small Intestine, the Cecum and a Portion of the Colon," in which he referred to the fact that the abdominal viscera and peritoneum are subject to various malformations and malpositions, sometimes acquired and often congenital, and unless the surgeon be familiar with these unusual phenomena his diagnostic ability will be curtailed, by confusing conditions for which he can find no adequate explanation. The peritoneal fossæ may be responsible for the most remarkable forms of hernia and this is especially true of the duodenal fossæ. He carefully reviewed the anatomic formation in this region and reported the case described in the title.

Operations for Goiter.

Dr. B. Farquhar Curtis, New York, read a paper entitled "Thyroidectomy and Sympathectomy for Exophthalmic Goiter," in which he referred to the fact that the surgical treatment of this condition has excited much interest of late owing to the fact that medical treatment failed in many cases, although he believed, if the disease had not progressed too far and the patient's circumstances were such as to permit systematic treatment for a sufficient length of time, rest, hygienic measures and proper medication will generally produce a cure, or at least hold the symptoms in check, but there are many cases amenable to surgical treatment that can not be cured by medicine. However, this treatment is not unattended by dangers, especially acute exacerbations of the symptoms known as thyroidism, which is just as liable, however, to be produced by operation in any other part of the body.

In conclusion, he stated that exophthalmic goiter could be cured by both thyroidectomy and sympathectomy, a perfect result being secured in about 60 per cent. of the cases of thyroidectomy, and an immediately good result appears to be the rule in sympathectomy. Sufficient time has not elapsed to judge of the permanence of the cure, but the immediate results are far superior to those of thyroidectomy. The relative mortality of the two would seem to favor sympathectomy (Kocher 4 deaths in 59 cases of thyroidectomy and ligation only; Jonnesco no deaths in 14 cases of bilateral sympathectomy), although in his own cases the result is the opposite. He believed that local anesthesia should be employed, and sympathectomy should be performed only on one side at a time, a sufficient time being allowed to elapse for the patient to recover from the effects of the first operation.

Operations on the Prostate.

Dr. Willy Meyer, New York, read a paper entitled "Prostatectomy and Galvano-Caustic Prostatotomy (Bottini's Operation); Their Present Status in the Radical Treatment of the Hypertrophied Prostate Gland," which he summed up as follows:

1. The operations making a direct attack on the enlarged prostate gland are preferable to those aiming to exert an indirect influence.
2. We have two useful operative procedures for the direct treatment of the enlarged prostate, i. e., prostatectomy and galvanocaustic prostatotomy (Bottini's operation).
3. In selecting the method indicated in the given case, we must individualize and be guided by anatomic, pathologic and social conditions.
4. Prostatectomy is, of course, the most radical and most surgical procedure; it should be the operation of choice whenever promising success.
5. Perineal prostatectomy offers advantages over the suprapubic method, since it enables the operator to do the operation under the direct guidance of his eyes.
6. Debilitated patients who seem unfit subjects for the more radical operation should not be relegated to catheter life, nor should prostatectomy be performed in order "to let them down easy"; they should be advised to have Bottini's operation done.
7. Surgeons should familiarize themselves with both methods in order to be in a position to do justice to their patients.
8. It is the duty of those refusing to do Bottini's operation under any circumstances to nevertheless advise patients who ask for more radical relief, to have Bottini's operation done, if the operation with the knife seems contraindicated.
9. Further, carefully compiled statistics as to the late results of both operative procedures, preferably in the hands of one man, are desirable in that they will increase our knowledge with reference to the proper selection of the proper method in the individual case.

Diffuse Gonococcus Infection of the Entire Upper Extremity.

Dr. Charles A. Powers, Denver, reported a case of this. His patient was a man of 28 years who developed a very extensive phlegmon in the neighborhood of the right elbow joint with concomitant swelling and edema of the entire limb from the pectoral region and shoulder to the ends of the fingers. The gonococcus was recovered from pus liberated by early free incisions, and was also found in a thin serous fluid which escaped at the site of other openings. The course was protracted over many weeks, the patient recovering with stiffened joints. The author emphasized the fact that systemic gonorrheal infection may invade the tissues in wide variety, the gonococcus having been found in the peritoneum, the pleura, the pericardium, myocardium, endocardium, meninges of the brain and spinal cord, periosteum, perichondrium, muscles and tendon sheaths, bursæ, fascia, the skin, the parotid gland, the kidney and the blood current, as well as the joints.

Myositis Ossificans Traumatica.

Dr. J. F. Binnie, Kansas City, Mo., read this paper, calling attention to the fact that bone may be formed in muscle or tendons under several distinct conditions; there may be a process of ossification attacking one muscle after another, myositis ossificans progressica, producing the ossified man of the freak shows. Often repeated slight traumata give rise to bone growths in muscle or tendon, examples of such growths being "riders' bone," "drill bone," "cavalryman's bone," and "fencers' bone," and lastly there is the so-called myositis ossificans traumatica, where a mass of bone forms in a muscle after a single injury. The author reported a case of the latter in a man aged 41 who had received a severe blow on the right forearm two weeks previously while boxing. One week later the tumor was removed, and eight months thereafter there had been no recurrence and no disability. The paper dealt fully with the literature on the subject and the various theories of the origin.

Method of Instruction in Surgical Pathology.

Dr. J. C. Bloodgood, Baltimore, said that clinical instruction in hospital wards and out-patient departments always has certain defects and limitations as a complete method of instruction. He felt that during the time the student spends in the wards many important surgical diseases had not been seen at all, or so rarely that the student did not get a clear conception of the disease, and in addition it is very difficult for the student to follow the patient throughout the progress of the disease and his after condition. In the Johns Hopkins Hospital the instruction of the third-year medical class in the surgical laboratory is divided into two parts: First, the systematic part, in which the instruction is given by pamphlets, museum specimens, microscopic sections and illustrations. Second, the more difficult or routine instruction, which is limited to the fresh material sent to the laboratory from the operating and autopsy rooms. He then described each of these parts in detail.

Officers Elected.

The following officers were elected: President, Dr. N. P. Dandridge, Cincinnati; secretary, Dr. Dudley P. Allen, Cleveland; treasurer, Dr. George R. Fowler, Brooklyn; recorder, Dr. Richard H. Harte, Philadelphia. The next meeting will be held in St. Louis some time in May, 1904.

(*To be continued.*)

DENVER CITY AND COUNTY MEDICAL SOCIETY.

Regular Meeting, held May 5, 1903.

Dr. S. D. Hopkins in the Chair.

The Prognosis of Diseases Incidental to Military Service in the Philippines.

Dr. G. H. Richardson, U. S. A., said that of the 166 cases of insanity reported in the Army in 1901, 120 cases occurred in the Philippine Islands, or 2 of every 1,000 on duty there. In 1900 the numbers sent from the Philippine Islands to the United States was over 200. During part of 1900 and 1901 he was in charge of the detention ward in San Francisco where these cases were sent for diagnosis and observation. It was found that 25 per cent. of all cases were, on their arrival here, in such a mental condition as to permit them to be returned to duty. The sea voyage home and the fact that they were once more on their native soil seemed to cure them. Those who were sent to the Government Insane Asylum in Washington, he is informed, did not remain there for any length of time, with the exception of those in whom a diseased mental condition existed prior to enlistment. The form of insanity was a mild melancholia with suicidal tendencies. The history of nostalgia was always marked. Secondary effects of heat exhaustion produce various neurotic conditions. They are vague and indefinite. Severe headache, general weakness, local dyspeptic symptoms, loss of memory, epileptiform seizures, local palsies, choreiform attacks, failure of vision and other affections of the special senses. In 1901 21 were discharged for cephalgia alone. It is impossible to determine how far these sequelæ are attributable to sun exposure or how far they may depend on some intercurrent disease. He does not think the condition is altogether due to simple sun heat. There must be some special element in the solar spectrum. This class of cases should be sent back at once to the states or some cool climate. In not a few instances, with the most careful treatment, medicinal and climatic, serious permanent diseases of the brain remain, giving rise sometimes to distressing intellectual enfeeblement. Their symptoms are entirely subjective and, like the "railroad spine" to the surgeon and claim agent, by their irregularity and indefiniteness, they give no end of trouble and worry to pension boards

The gastrointestinal trouble forms the majority of cases sent for treatment Dysentery stands at the head of the list. The amebic form is the more chronic, but more amenable to treatment, especially the local use of high injections of quinin The tendency to relapse, however, is constantly hanging over one who has had it once, and what is worse, is liable to develop abscess of the liver The bacillary form never causes abscess of the liver, the acute symptoms, however, are apt to be more severe and death is likely to occur early in the disease.

Sprue is frequently met with in the tropics It may remain latent there and develop for the first time in a temperate climate. It is characterized by alternating periods of exacerbation and quiescence, inflamed eroded tongue, flatulent dyspepsia, pale, copious, loose, frothy fermenting stools, marked emaciation and a tendency to relapse. It is slow in its progress, and unless cured tends to terminate in atrophy of the intestinal mucosa, and sooner or later prove fatal The prognosis depends on the length of time the disease has existed, the age of the patient being bad for cases over 50, and careless, indifferent patients who do not realize the dangers in which they are, and for those cases who can not or will not restrict themselves to a pure milk diet for a considerable length of time Cases of chronic diarrhea should be examined for the malarial parasite Sixteen cases diagnosed as pulmonary tuberculosis showed the presence of malarial parasites Treatment by quinin for a few days proved the infection to be of malarial origin.

Report of a Case of Cerebral Lues

Dr J E Courtney reported the following case T B, white, aged 24, cook. One year before he came under observation he was thrown from a buggy and struck on the left temple, was dazed for ten minutes He denied any knowledge of ever having contracted syphilis, but recalled he had, some five years ago, a small sore on the glans penis, but it disappeared quickly A year later he had some soreness and swelling in the inguinal region, but no suppuration, no eruption He was in good health afterwards and served with the Rough Riders in Cuba He experienced gradual failure of vision in the left eye for nearly a year, which has now been blind for several months, but with little pain until within the last three days. Left eye tender, tension increased, slight ptosis, ball congested, partial detachment of retina Antedating the blindness of the left eye he noticed he could see objects to the left of the left eye, but not to the right—unilateral temporal hemianopsia About six weeks ago he noticed jerking of the face and twitching of the muscles of the left arm, and then he lost consciousness The day preceding this attack he was very sleepy, and for two days after he slept almost continuously day and night No failure of articulation, but speech slow, gait lacking in elasticity, no decided reflex or vasomotor disturbances He was then in the county hospital for five weeks He had a second fit and in delirium jumped out of a second story window on one occasion, and on another escaped and ran a block or two from the hospital under the idea that he was being killed Inunctions of mercury and large doses of iodid of potassium were administered and he improved rapidly and weighs now forty pounds more than when he was ill The interesting question which this case presents is, whether so slight a trauma started into activity the latent infection, and whether an original antisyphilitic course of treatment would have frustrated such late effects.

A New Sterilizer.

Dr George Moleen exhibited a sterilizer which has the advantages over others in the market by being compact, portable and consisting only of three pieces, which includes receptacle for water, a compartment for instruments and dressings, etc. It is especially serviceable in obstetrical practice.

WEST VIRGINIA STATE MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, held in Charleston, W. Va, May 26-28, 1903.

The President, Dr H B Stout, Parkersburg, in the Chair.

The president's annual address contained many suggestions of great importance to the moral and material welfare of the association.

Organized Mutual Defense.

The secretary's report showed the association to be in a prosperous condition and that the great strides it has made during the past year were made possible by its partial reorganization at the last meeting The report closed with the recommendation that the association undertake to protect its members in suits of malpractice.

The association acted on this recommendation and adopted the following resolution:

> *Resolved*—That this Association pledges its moral support and will substantially defend any member who shall be sued; and further pledges the services of any and all its members, when called on, to attend any trial and testify in behalf of the member sued.

Reorganization.

The meeting was an especially pleasant and profitable one. A partial reorganization had been effected in 1902, but, under the impression that the profession was not ready for the adoption of the entire Association plan, no provision was made for a House of Delegates, and this made many other changes in the constitution and by-laws necessary. As in other states where similar action was taken, some confusion and dissatisfaction had resulted, although everybody was greatly encouraged by the fact that, in spite of these difficulties, the membership had been almost trebled during the year, and that an increased interest in every phase of professional work was manifest on every hand After a careful consideration and discussion of the situation, it was finally decided to set aside the action of last year and adopt the American Medical Association plan in full This was done by unanimous consent and with much enthusiasm.

Too much credit can not be given to the officers of the association, including councilors, for the ease with which this complete plan of organization was adopted, although they had able assistance from Drs Jepson, Wilson, Sharp and many other leading members. This makes the third state to set aside the partial reorganization of last year and accept the uniform plan proposed by the Association

Officers Elected.

The following officers were elected: President, Dr. T. L. Barber, Charleston; vice presidents, Drs Thomas M. Hood, Clarksburg; E T. W Hall, Freemansburg; Rolla Camden, Parkersburg; secretary, Dr Wm W. Golden, Elkins; treasurer, Dr. V T Churchman, Charleston, councilors, first district, Drs. C. A Wingerter, Wheeling, and J W McDonald, Fairmont; second district, Dr C. S Hoffman, Keyser, and W. H. Proudfoot, Rowelsburg; third district, Dr W W. Tompkins, Charleston, and O O. Cooper, Hinton; fourth district, Drs W. S. Keever, and H B. Stout, Parkersburg, fifth district, Drs. C. R. Enslow and T. W Moore, Huntington, delegates to the American Medical Association, Drs S L Jepson, Wheeling, and W. H. Sharp, Parkersburg Fairmont was chosen as the next place of meeting

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MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

One Hundred and Fifth Annual Meeting, held at Baltimore, April 28 to 30.

Colored Photography.

Prof. R. W. Wood of Johns Hopkins University opened the session by request, with a lecture on colored photography and photography of objects usually invisible, as waves of sound, bullets in motion, etc.

The Last Fifty Years.

Dr. William Travis Howard, the president, delivered his address, which consisted of a review largely of his personal experience, to show that the past fifty years do not contain all or even the chief advances that have been made in medicine. He gave a sketch of Dr. John P. Mettauer of Farmville, Va., son of a French surgeon of the Revolution, under whom he studied and who was a most original and skilful surgeon, far ahead of his day. He was particularly successful in the treatment of hernia, vesico-vaginal fistula, stricture, etc. He eulogized the faculty of Jefferson Medical College of that day. He paid tributes to the work of Gerhard, who was the first in this country to make the distinction between typhoid and typhus fever, and J. K. Mitchell, who was the first to teach the germ origin of malarial fevers. Dr. William Power of Baltimore was, he said, the best teacher he ever knew, and the first to use quinin in full doses for the relief of the paroxysm of malarial fever. He then spoke of the discoveries of the past half century and compared them with those of previous times, and said that no one should allow himself to be engrossed with the present to the exclusion of the past.

The Second Day.

Dr. Robert W. Johnson reported "Twenty-five Recent Operations for Wounds, etc., of Abdominal Viscera." Dr. William H. Pearce read a paper on "Medical Communism," in which he argued that physicians who make important discoveries in medicine should derive pecuniary benefit from them as they do from their books, and illustrated his ideas by a reference to the case of the late Dr. Walter Reed. Dr. Charles O'Donovan discussed the "Water Supply of Baltimore," and urged that the city should buy the watershed. In the afternoon papers were read by Drs. C. F. Davidson, Robert Reuling, John C. Hemmeter, H. Woods, Jr., W. B. Wolf, H. F. Cassidy, F. C. Boyne, J. Friedenwald, L. J. Rosenthal, W. S. Baer, H W. Kennard, T. R. Brown and T. Cooke, Jr.

Poison Law.

At the business session a committee was appointed to confer with a delegation from the Maryland Pharmaceutical Association with a view to urging before the legislature a law prohibiting the sale of poisonous substances by unauthorized persons. A motion to form a woman's auxiliary to assist in raising funds for a new building was referred to the executive committee. A committee was formed to found a "Fund for the Relief of Widows and Orphans of Deceased Members."

Presentations.

A portrait of Dr. Aaron Friedenwald was presented by his son with a eulogy pronounced by Dr. T. S. Latimer.

Dr. Osler presented a crayon portrait of Dr. John Crawford, and oil portraits were also presented of Drs. Edward White and J. R. W. Dunbar.

Election of Officers.

The following officers were elected: Dr. Eugene F. Cordell, Baltimore, president; Drs. Franklin Buchanan Smith, Frederick, and James M. Craighill, Baltimore, vice-presidents; Dr. J. Williams Lord, Baltimore, secretary; Dr. Thomas A. Ashby, Baltimore, treasurer, and Drs. Harry Friedenwald, G. Lane Taneyhill, Samuel Theobald and John D. Blake, all of Baltimore, executive committee.

Tuberculosis.

At the third day's session Dr. H. Barton Jacobs read a paper on "Our Need of a Mountain Sanatorium for Indigent Consumptives," and the subject of tuberculosis and its prevention was discussed by Drs. Welch, Thayer and Fulton. All advocated notification, and Dr. Thayer urged public sanatoria for both incurable and incipient cases and also public lectures throughout the state.

Other Papers.

Dr. C. Hampson Jones and Wm. Royal Stokes exhibited slides of smallpox patients and tissues.

Dr. J. Clement Clark spoke on the "Increase of Insanity."

Other papers were read by Drs. R. P. Smith, E. B. Claybrook, John Turner, W. F. Skillman, Frank Martin, H. H. Young, A. G. Barrett and L. K. Hirshberg.

At the evening session Dr. Simon Flexner delivered the annual oration on "An Aspect of Modern Pathology."

Dr. C. C. Bombaugh read a poem on "Preventive Medicine."

Drs. L. A. Griffith of Upper Marlboro and J. A. Stevens of Oxford were elected to fill vacancies on the board.

Chairmen of Committees.

The following chairmen of committees were appointed: Library, Dr. G. J. Preston; publication, Dr. J. W. Lord; memoirs, E. F. Cordell; ethics, S. Theobald; legislation, William H. Welch; program, H. O. Reik; membership, W. S. Gardner; general sanitation, Jas. Bosley; finance, T. A. Ashby; county medical societies, C. M. Ellis; delegates to American Medical Association, Drs. Wm. H. Welch and William Osler, with Thomas L. Cullen and S. T. Earle, Jr., as alternates. Dr. H. M. Hurd was elected a trustee.

FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

Held at Madrid, April 23-30, 1903.

(By Cablegram and Letters.)

(Concluded from page 1600.)

Medicine and Classic Paintings.

In the second general session Holländer, Berlin, gave a lantern address with views of about 200 paintings from public and private galleries which had been inspired by medical subjects. He spoke in Spanish, and dwelt particularly on the so-called anatomic paintings in which he claimed that the Dutch school reached its highest eminence.

Section on Medicine: Importance of Routine Medication.

Dr. J. B. Obregon read this paper and emphasized the long history and the logical importance of the counter-irritant method of treatment. Its action, he said, is most manifest in certain cases of acute edema laryngis and bronchiolitis in which prompt vesication immediately turns the tide of the disease. It is also indicated in all forms of internal inflammation in which it can be applied.

Pneumatic Bulbs for Aseptic Hypodermic Injection.

Dr. Pierre Laurent, Bois-Colombes, proposed a method by which the flow of the fluid from bulbs containing medicaments for hypodermic use may be facilitated. He suggests that the excess of space in the bulbs be filled with gas under pressure.

Physiology and Therapeutics of Hypnotics and Narcotics.

Dr. V. Peset y. Cervera read a paper on this subject, in which he said that these agents are to be divided into those that exercise a direct effect on the brain and those that produce sleep indirectly. As has been shown by histologic and chemical methods, cerebral fatigue depends on an actual alteration in the nervous substance. These changes probably interest chiefly the nucleinic acid and are induced by insufficient oxidation or the action of certain leucomains. The direct hypnotics appear to act in the same manner, but more harshly. The indirect hypnotics and hypnotism act on the brain secondarily through the nerves, respiratory and cardiac functions. The theory of the retraction of the processes of the nerve cells does not satisfactorily explain normal or pathologic sleep. The state of the intracranial circulation expresses the successive phases or grades of the action of the pharmacological hypnotics: 1, Active congestion (excitation); 2, relative ischemia (hypnosis); 3, passive congestion (narcosis). As there is no sleep center, the action must be a general chemical one on the brain.

The Protective Role of Human Saliva.

Dr. Miller, Berlin, described the relations of the saliva to dental caries and other infectious diseases of the mouth. He has found that the saliva of man, *per se*, possesses absolutely no antiseptic or protective properties. Sulphocyanid of potassium has no bactericidal action, nor has the buccal mucosa. The saliva does not contain cytases, nor is it hemolytic. The secret of antisepsis of the buccal cavity lies in the buccal flora. They crowd out and eliminate the majority of saprophytes and pathogenic bacteria by simple outgrowth. Phagocytosis plays an important rôle in the diseases of the soft parts. The character of the teeth predetermines to a great extent the occurrence of caries.

Dr. C. E. Nammack, Utica, N. Y., described the six varieties of climate in southern California, which he calls "The American Italy."

The Influence of the Toxins of Diphtheria and of Tetanus on the Blood.

Dr. H. Kucharzewski, Warsaw, detailed the results of laborious experimental research on the effect of subcutaneous doses of the toxins of diphtheria and tetanus, as shown by changes in the corpuscles, the hemoglobin and the specific gravity of the blood. The results, in general, were the same for both. The erythrocytes and the quantity of hemoglobin are diminished by large and medium doses, while the specific gravity is increased. A polynuclear hyperleucocytosis is present which is at its height in the agony, but which declines gradually in the cases which are not fatal (small doses). In cases which are fatal there is a diminution of the lymphocytes and of the eosinophiles; in non-fatal cases the latter are increased. In infectious diseases, examination of the blood may thus give valuable prognostic indications, depending on the relative increase (favorable) or decrease (unfavorable) of the eosinophiles.

Rational Treatment of Tuberculosis.

M. Monier, Liège, is of the opinion that all our mistakes in phthisiotherapy are traceable to the notion that we can attack the bacillus. The only method of treating tuberculosis is to build up the organism by zomotherapy, fresh air and full feeding.

The Soil for Tuberculosis.

One of the most interesting communications was by A. Robin, Paris, in which he presented his views, which have been fully reviewed in The Journal. He claims that the predisposition to tuberculosis is characterized by exaggerated oxidations and demineralization of the organism, evidenced by declining strength and resisting power. Tonics and stimulants aggravate the evil. Treatment should aim to restrict the oxidating processes, to restore the normal proportion of mineral substances and to combat the tubercle bacilli by local medication, such as inhalation of antiseptics or creosote by the rectum, to be eliminated by the bronchi.

Section on Surgery.

The honorary presidents appointed were Ceccherelli, Parma; Villems, Brussels; Le Dentu and Doyen, Paris; Küster, Marburg, and Sonnenburg, Berlin.

Radical Cure of Femoral Hernia.

Dr. O. v. Lassen, Denmark, said that the methods of Salher or of Schwartz, by which a muscular flap of the pectineus was dissected off and attached to the crural canal were inefficient, inasmuch as the muscle tends to atrophy. He prefers to suture the fascia of the pectineus to Poupart's ligament as far as the falciform process, introducing his needle armed with not too fine gut, but a little deeply into the muscle itself, and taking five or six stitches. The method is applicable in nearly all cases. He has seen only 3 recurrences in 45 cases, although 31 were of two to six years' standing. The recurrences were due to exceptional circumstances and therefore excusable.

Surgical Treatment of Cutaneous Tuberculosis.

Dr. H. Morestin, Paris, said that extirpation was the only method of treatment.

In a second communication he described a plastic operation for prominent ears, comprising the excision of the posterior bands and of pieces of cartilage.

In a third communication he reviewed the methods of cheiloplasty, and in a fourth described an esthetic operation suitable for cases of slight inguinal hernia, in which the incision is made in the hairy region over the pubes, horizontally or vertically. It is especially suited to congenital cases, and does not permit of complicated sutures. (Described in The Journal, page 1543.)

Epiploitis After Resection of the Omentum.

Dr. J. Ortiz de la Torre, Madrid, pointed out that the numerous sutures which had to be sunk in the abdomen, in cases of hernia in which the omentum was resected, multiplied the chances of infection. It manifests itself eight to ten days after operation by fever, pain and tenderness. It tends, rather slowly, to the formation of abscesses, which point either to the exterior or to the intestine, and tend to be well walled off from the peritoneum by adhesions. Treatment should be expectant and narcotic until the abscess points. The speaker urged hemostasis in epiploiectomy by some other method than suture.

Surgery of the Stomach.

Dr. Ceccherelli, Parma, reviewed in detail the various maladies of the stomach and posed as a champion of surgical intervention. He asserted that in very many cases operation accomplished its object, not by attacking the primary malady, but simply by permitting the stomach to empty itself more freely. The organ thus gains the repose necessary to recovery. He holds that even the functional disorders, if severe, indicate operation. Cardenal, Barcelona, thinks that the "pyloric triad" demands operation, and all cases of certain neoformation, even without severe symptoms, and all dubious cases with rapid decline of weight and strength. He regards gastroenterostomy as the best palliative measure against hemorrhage and perforation, and sees no reason why cancer of the stomach should not be cured by radical extermination as in other localities. Hartmann, Paris, is rather inclined to restrict gastroenterostomy in favor of resection in intervention on the stomach.

Heat for Tuberculosis.

Dr. S. Clado, Paris, extolled the application of heat to local and accessible foci as a valuable measure in tuberculous infection.

Dr. T. A. Fort, Paris, said that linear internal electrolysis is easy and almost painless. There is little loss of blood and little danger of urinary fever. No permanent sound is necessary. There is immediate relief and no shock. In 50 cases his mortality has been *nil*. It is superior to gastrostomy in case of stricture of the esophagus, on condition that it is permeable.

Dr. W. Nagel, Berlin, described his method of perineal suture after Tait for restoring the perineum.

Areilza and Arregui, Bilboa, described experimental research which showed that interposition of muscle tissue is a frequent cause for the non-healing of fractured bones and of pseudoarthrosis. They distinguish a special form of the latter due to destruction of the vessels and occlusion of the Haversian canals, for which amputation is the only relief. They call this form "pseudoarthrosis eburnea.'

San Martin, Madrid, is convinced that much of the danger of chloroform can be suppressed by avoidance of mouth breathing. He advocates administering the anesthetic through a single nostril.

Iodoform Filling for Bone Cavities.

Silbermark stated that Mosetig has applied 445 fillings in 121 cases with the technic described recently in The Journal, page 1545. In one instance two-thirds of the diaphysis were removed and substituted by this filling with undisturbed healing.

Pneumatic Instruments in Surgery.

L. Mencière, Rheims, exhibited his "revolver osteotome," which resembles a revolver in appearance and is operated by a trigger, the force supplied by liquid carbonic acid gas. The piston can strike 3,000 blows a minute on the pneumatic hammer armed with the osteotome or chisel. He thinks that there is a future for pneumatic instruments of this kind, as they are easy to manage, simple and inexpensive. Any compressed or liquid gas can supply the power.

Section on Obstetrics: Prognosis of Face Presentations.

Dr. W. Nagel, Berlin, combated the general belief that face presentations with chin posterior were of bad prognosis. He said that this position occurred as a very natural and frequent evolution of primary occipital presentation, and almost invariably righted itself by rotation of the chin anteriorly. Narrow pelves may prevent the entrance of the face, as of the head in other forms of presentation, and always indicated early version. Innate dolichocephaly, as contrasted with the acquired forms, is an important factor in face presentations.

Operation for Retroflexio Uteri Mobilis.

Dr. A. Schucking, Pyrmont, fixes the portio vaginalis and the fornix posterior vaginæ by means of two circular ligatures of silver thread, which remain in place four to six weeks. In 18 cases the results were almost always satisfactory. In one case he replaced Schultze's pessary by an injection of paraffin into the anterior fornix.

Treatment of Placenta Previa.

Dr. A. R. Simpson, Edinburgh, said that most cases of placenta previa demanded immediate bipolar version and slow extraction. If diagnosed late in pregnancy and the hemorrhage has not been severe, an expectant method is indicated. In primiparæ especially we should resort to preliminary tamponade of the vagina or hydrostatic dilatation. In marginal implantations the placental lobules may be separated from the inferior uterine segment with the finger, which permits the os to dilate without fresh hemorrhage. The third stage demands the greatest care, with, at time, tamponade of the uterus.

Section on Pharmacy: Effects of Injections of Antidiphtheric, Antitetanic and Antistreptococcus Serum on the Blood.

Dr. H. Kucharzewski, Warsaw, read a paper on the effects of the subcutaneous injection of these various substances into rabbits, and also of normal serum taken from a horse. He found that these various sera produced exactly the same results when injected in various quantities as did corresponding quantities of the normal serum of the horse. Hence, he concluded that the effects were due to the serum, and not to the specific antitoxic content. In detail, small doses are without any effect. Moderate doses produce a slight hyperleucocytosis for two to three days. Massive doses slightly diminish the number of red corpuscles and the hemoglobin; do not affect the specific gravity, but produce a considerable increase of the polynuclear and diminution of the mononuclear leucocytes.

Section on Rhino-Laryngology: Etiology of Ozena.

Dr. W. Freudenthal, New York, said that ozena is an atrophy of all the inner coats of the nose, due chiefly to excessive dryness of the air, complicated by the secondary invasion of a bacillus. The micro-organism can not enter unless the soil has been previously prepared in this fashion. Sinusitises are frequently secondary to the ozena.

Atrophic Coryza.

Dr. E. J. Moure, Bordeaux, discussed in great detail the various forms of atrophy, rhinitis and ozena, and their combinations. As regards treatment, he said that it was sufficient in case of purulent ozena of adults to suppress the inflamed tissue and to employ nasal lavage. Massage with silver nitrate spray is an excellent mode of treatment. Hypertrophied mucosæ tend gradually to disappear, even if cocain and adrenalin do not affect them, and excision is very dangerous. In pseudoatrophic strumous ozena lavage and general constitutional treatment suffice to cure the rhinitis. Complicating sinusitises demand surgical intervention. Finally, in the true atrophic ozena, in young children, one should employ simply systematic lavage, until the patient has attained an age suitable for operative procedure. At this point the nasal cavity is reconstituted by means of interstitial injections of paraffin, which fill out the cavity and prevent the accumulation of foul-smelling, decomposing secretions.

Section on Neurology: Folies Toxiques.

Dr. J. Galiana, Madrid, read a paper on those cases of chronic alcoholism in which mental degeneration entered as a complicating factor. In such cases the manifestations of chronic and of acute alcoholism are noticeably different from the pure types. In some of these cases acute attacks may resemble the suspension of mental functions of epileptics. The disturbances of chronic alcoholism are accentuated The terminal dementia occurs earlier; instead of the motor system, it is the psychical system, as the point of least resistance, which first breaks down. Alcoholism tends to accentuate and develop all previously existent psychical anomalies. In epileptics it multiplies the number of attacks, but is never a cause of the disease *per se*. In hereditary neurotic or degenerative individuals, alcohol tends much more rapidly to induce delirium; a single debauch may thus precipitate a typical delirium in such cases. The speaker then proceeded to a discussion of the syphilitic psychopathics. Secondary syphilis produces psychical aberrations in degenerates, inducing these effects both through the mental anxiety, the anemia, and possibly cellular intoxications. True syphilitic psychoses are perturbations of the order of delirium, of dementia and of the motor functions. The last are of great diagnostic import, and may be either paralytic, convulsive, tremulous or ataxic. He then detailed the various clinical forms of syphilitic motor disturbances, especially pseudo-general paralysis. It is a factor in most cases of true general paresis which occurs notwithstanding early and thorough antisyphilitic treatment and also persists in spite of it.

Resolutions Adopted by the Congress.

In anatomy the importance of topographic representations of the human body being generally recognized, professors of anatomy are asked to co operate to have an extensive exhibit in this line at the next international congress.

In general pathology, an international committee was planned to revise and classify the known bacteria and study those newly discovered. The authorities were also asked to collect data in regard to the prevalence of rhino scleroma in Spain In pharmacy, the necessity of standardization of curative serums and of international unification of hypodermic injections and heroic drugs was recognized by a resolution to this effect. The section on neuropathology unanimously voted an appeal to the lay press to refrain from publishing the details of crimes, as the contagion of criminal impulses among the population is an established fact. Other resolutions were adopted in regard to the suppression of alcoholism and criminal responsibility, recommending for the latter the legislation on the subject in Portugal and the appointment of experts in mental affections to examine all criminals. Among the four resolutions adopted by the section on pediatrics is one that appeals for the revision of the entire chapter of infantile diplegias, while another urges the construction of more sanatoria for children in the country and on the coast. In dermatology, the committee appointed at the last congress to study the unification of optometric scales, was confirmed and ordered to report at the next congress. The section on otology advocated that the autopsy of deaf mutes should be obligatory in public institutions, and that otology should be included in the medical curriculum.

The general sessions adopted a resolution deploring the increasing multiplicity of languages at the international medical congresses and the confusion resulting therefrom, urging the necessity of adopting a common medium.

Impressions at Madrid.

Many members of the congress commented on the comparative absence of saloons in Spain. Very little distilled or even fermented beverages are consumed and the dramshops, even in the large cities, are frequently a long distance apart Folet mentions, in a letter to the *Echo Méd.*, that at a popular and fashionable restaurant he noticed only one person taking a small glass of cognac in the crowded rooms. During the bull fight the cries of men selling "pure water" were heard on every hand. The enthusiasm of the spectators at the horrors of the bull slaughtering was an interesting psychologic study to the visitors.

The meetings of the sections were held in halls opening into each other, so that the proceedings were disturbed by persons passing through to rooms beyond. The confusion in regard to announcements was also great as the thousands of members gathered at one or at most two small wickets clamoring for information of all kinds. Hundreds of the members gave up the attempt and more were to be found in groups in the world-famous picture galleries than in the section meetings.

The visitors were favorably impressed by the standard of medical science in Spain. Also by the cordial welcome they received, although it was somewhat marred by the cupidity of the general public.

A bull fight had been planned as one of the official entertainments, but this plan was abandoned and the members who attended the bull fights had to pay for admission. The fêtes were all remarkably brilliant and interesting. It was curious to note here and there in the scientific meetings some legal light, civil engineer or other non-medical member of the congress.

Therapeutics.

Sciatica.

G. L. Bailey, in *Cincinnati Lancet-Clinic*, recommends, in the treatment of the acute attacks of sciatica, that the patient be placed in a reclining position in a hot-air apparatus with all the body inclosed, except the head. The affected limb should be comfortably bolstered up and temperature gradually raised to 240 F. or 260 F., according to the toleration of the patient. During this process he should be induced to drink freely of cool water, and ice cloths should be applied to the head. The patient should be allowed to remain in this position for one hour, followed by an alcohol rub, and then he should be put to bed with the limb well supported.

This treatment should be followed out daily for five or six days, when the pain will have been relieved sufficiently to allow gentle massage giving firm pressure over the nerve, and at its point of exit from the pelvis. As the pain subsides the massage may be given deeper and harder. The patient will usually find complete relief within two or three weeks. In the chronic cases the treatment is practically the same, except that more vigorous massage may be given. Nerve stretching may be accomplished by deeply grasping the muscles of the thigh while the patient is lying on his face and the nerve forcibly pushed and pulled by the operator. With the patient lying on his back, the thigh flexed on the abdomen with the leg extended serves a similar purpose for stretching. Massage and electricity, both galvanic and faradic, are valuable in restoring the atrophied muscles and the circulation. The patient should be instructed to carry out such exercises at home as will tend to produce a stretching of the sciatic nerve and give exercise to the muscles.

Metcalf recommends the following in the medicinal treatment of sciatica:

℞.	Tinct. aconiti		
	Tinct. colchici sem.		
	Tinct. belladonnæ fol.		
	Tinct. cimicifugæ, āā	ʒii	8

M. Sig.: Six drops every six hours.

The glycerophosphates are valuable in the treatment of the chronic forms as follows:

℞.	Calcii glycerophos.		
	Sodii glycerophos., āā	ʒiss	6
	Ferri glycerophos.	gr. xxx	2

M. Ft. capsulæ No. xxx. Sig.: One after each meal, three times a day; or:

℞.	Calcii glycerophos.	gr. xv	1
	Mag. glycerophos.	gr. xv	1
	Pot. glycerophos. (75 per cent.)	ʒss	2
	Sodii glycerophos. (75 per cent.)	ʒiss	6
	Aq. destil.	ʒviss	25

M. Sig.: Inject thirty to sixty drops into the seat of the pain once daily.

Locally the following may be applied once or twice daily:

℞.	Acidi salicylici	ʒss	2
	Ichthyol		
	Olei hyoscyami comp.		
	Lanolini, āā	ʒiv	15

M. Sig.: Apply locally.

Hay Fever.

According to L. B. Locard, in *Boston Med. and Surg. Jour.*, the treatment of hay fever is either preventive or palliative. With the proper preventive treatment from 60 to 80 per cent. of the cases may be rendered immune, and by the palliative treatment a large majority of the cases may be given complete relief.

The preventive treatment as outlined by the author consists, locally, in correcting deformities and cauterizing the sensitive areas lightly with the galvano-cautery. The constitutional treatment should be started four or five weeks before the usual commencement of the attack. The object of this form of treatment should be to increase the elimination and decrease the production of uric acid, to correct any neurosis present and other abnormalities.

To increase the elimination and decrease uric acid production, alkalies, lithia and sodium salicylate should be given, together with a proper regulation of the diet. Chloretone should be administered as a nerve sedative, giving it just previous to an expected attack. The palliative treatment consists in the use of adrenalin locally, followed by an oily spray. If this does not check the excessive nasal secretion morphin or atropin will usually control it or caffein and suprarenal gland may be given internally.

The patient should wear smoked glasses for the eyes and use adrenalin solution or boric acid and camphor water as an eye wash.

As a local application in the treatment of hay fever Yeo recommends the following:

℞.	Resorcin	gr. iss		09
	Sod. chloridi	gr. iv		25
	Acidi acetici	m. ii		12
	Aquæ q. s. ad	℥i	30	

M. Sig.: Apply locally with a brush or a swab and repeat the application frequently.

Hydrozone may be used as a local application as follows:

℞.	Hydrozone	℥ss	15
	Aq. destil.	℥vi	180

M. Sig.: Apply as a nasal douche four times a day, beginning two weeks before the expected attack. The author also recommends a local application of deodorized cod-liver oil sprayed into the nares every three hours.

Constipation.

The following combinations are recommended by Huchard in *Prog. Medical*, in the treatment of constipation:

℞.	Pulv. glycyrrhizæ		
	Pulv. sennæ, āā	℥ii	60
	Sulphuris		
	Pulv. foeniculi, āā	℥i	30
	Pulv. sacchari	℥vi	180

M. Sig.: One or two teaspoonfuls at a dose; or:

℞.	Sulphuris sublim.		
	Magnesiæ (calcined), āā	gr. lxxv	5

M. Ft. chart. No. x. Sig.: One powder every two or three hours; or:

℞.	Magnesiæ (calcined)	℥iiss	75
	Lactose	℥iss	45

M. Sig.: One teaspoonful in a little water on rising in the morning; or:

℞.	Magnesiæ			
	Sod. benzoatis, āā	gr. xxxvi	2	40
	Pulv. rhei	gr. lxxv	5	
	Pulv. nucis vom.	gr. viiss		50

M. Ft. chart. No. x. Sig.: One powder as necessary to correct the constipation.

Burnett, in *Med. Summary*, recommends the following in the treatment of constipation:

℞.	Sulphuris	℥ss	15
	Pulv. rhei	ʒii	8
	Pot. et sodii tartratis	℥i	30
	Sacchari albi	℥ss	15
	Pulv. cinnamomi	ʒss	2

M. Ft. chart. No. xvi. Sig.: One every two hours in water.

Epilepsy.

The following combination, according to Morrow in *Med. Summary*, is of value in checking epileptiform seizures:

℞.	Potass. bromidi	℥ss	15
	Chloralis hydratis	ʒss	2
	Tinct. hyoscyami	ʒiiss	10
	Ext. cannabis ind. flu.	ʒii	8
	Aquæ q. s. ad	℥iv	120

M. Sig.: One teaspoonful every four hours during the day.

Acute Attacks of Gout.

The treatment of the acute arthritic attacks in gout, according to Wilson in *Applied Ther.*, should consist of rest in bed and elevation of the limb. The following is recommended locally:

℞.	Atropinæ	gr. iii		20
	Morph. hydrochlor.	gr. xv	1	
	Acidi oleici	℥i	30	

M. Ft. linimentum. Sig.: To be painted over the painful joint with a brush and followed by bandaging the joint with absorbent cotton; or:

℞.	Ext. opii........................	gr. xlv	3
	Ext. hyoscyami	ʒss	2
	Adipis	℥i	30

M. Ft. unguentum. Sig.: Apply to the painful joints with cotton wool; or:

℞.	Ichthyol	ʒi	4
	Ung. bellad.	ʒii	8
	Ol. petrolati	ʒiss	6

M. Ft. unguentum. Sig.: Apply locally night and morning; or:

℞.	Pulveris lini	℥iv	120	
	Aq. bullientis q. s.			
	Guaiacol	gtt. xx	1	30
	Glycerini	ʒi	4	

Misce: Mix the glycerin and guaiacol and spread on the flaxseed poultice and place it on the affected joint; or:

℞.	Linimenti belladonnæ	℥iii	90	
	Morph. hydrochloratis	gr. x		65

M. Ft. linimentum. Sig.: One teaspoonful to be mixed with a tablespoonful of hot water and applied on lint under oil silk every four hours.

The following combinations are recommended by *Merck's Archives* as internal medication in the treatment of chronic gout:

℞.	Formin	ʒi	4
	Lithii salicylatis	ʒiss	6
	Aq. menth. pip.	℥iii	90
	Syrupi	℥ii	60

M. Sig.: One tablespoonful in water two or three times a day.

[The formin in the foregoing prescription is a crystalline powder, soluble in water and alcohol. It is identical with urotropin and aminoform and is a uric acid solvent and genitourinary antiseptic.]

The following is also of service in the treatment of chronic gout:

℞.	Lithii brom.	℥i	30
	Sol. potass. citratis	℥iv	120
	Vini colchici rad.	℥i	30
	Syr. tolutani	℥i	30

M. Sig.: One teaspoonful well diluted in water after each meal; or:

℞.	Pot. iodidi	ʒiv	15
	Vini colchici sem.	ʒiv	15
	Tinct. stramonii sem.	ʒii	8
	Tinct. cimicifugæ	ʒvi	24
	Tinct. opii camph. q. s. ad............	℥iii	90

M. Sig.: One teaspoonful three or four times daily.

Medicolegal.

Refusing Examination—Motion for Specimen of Urine.—The Court of Civil Appeals of Texas holds, in Austin & Northwestern Railroad Company vs. Cluck, not only that, in the absence of a statute authorizing it, a court has no power to compel a litigant to submit his or her person to examination by a physician or any one else, but that a refusal to consent to be examined by a committee to be appointed by the court can not be shown on cross-examination before the jury. Having the legal right to refuse to submit to such an examination, the other side, the court holds, have no right to prejudice the party before the jury by showing an exercise of such legal right. Furthermore, the court holds that if it be conceded that the trial court had the power to compel the party who brought this action to recover for personal injuries to furnish a specimen of his urine for examination by physicians to be appointed by the court, before the other side could be heard to complain on appeal, it must be made to appear that their motion seeking to accomplish that result was seasonably made. The end which they had in view (which was an examination of the party's urine by a committee of physicians appointed by the court) would have required time for its accomplishment. The party would have been entitled to a reasonable time, in the due course of Nature, to furnish the urine, and the court would have been entitled to a like time within which to procure competent physicians to make the examination, and the latter would have been entitled to reasonable time within which to make such examination. For aught that appeared in the record, to have granted the motion at the time it was made might have resulted in an unreasonable delay in the trial; wherefore, the court of appeals holds that it was not made to appear that error was committed in overruling a motion to compel the party to furnish a specimen of his urine for such an examination.

Communication of Smallpox by Incompetent Nurse.—The Court of Civil Appeals of Texas holds, in Missouri, Kansas & Texas Railway Company of Texas vs. Freeman, that when the company took charge of one of its employes for the purpose of isolating, nursing and treating him for smallpox—a dangerous and infectious disease—it assumed and owed a duty to the public to employ competent and experienced persons and agents to perform that duty. It took the risk of all consequences of a wrongful execution of that duty, resulting from the incompetency of a nurse or guard so employed by it. It was the duty of the company's surgeon to employ a person as nurse or guard who had sufficient intelligence and discretion to remain isolated, and not leave the camp and go on the public streets, where he would likely come in contact with persons who had not had the disease, without first disinfecting his person and changing his clothes. It was the negligence of the company's surgeon in employing an incompetent nurse or guard that placed the latter in a position where he could, by reason of his negligence and incompetency, communicate the disease to others. And the court thinks that the company is liable where, as in this case, it employs an incompetent servant, and puts him in charge of a pest camp containing persons afflicted with smallpox, to isolate, nurse and guard such persons, and the servant, by reason of his want of discretion and incompetency, negligently leaves the camp and goes on the public streets of the city, and communicates the disease to another. If one to whom the nurse communicated the smallpox knew that the latter was a guard or nurse at a pest camp, but at the time he met him on the street was under the impression that he had disinfected his person and changed his clothes, and would not communicate the disease, then it was for the jury to determine whether such person was guilty of negligence in so coming in contact with such nurse.

Validity of Practice Acts—Who Exempted Practitioners.—The Supreme Court of Washington says, in the case of State on relation of J. W. Smith vs. Board of Dental Examiners, that the wisdom of such regulations, pertaining not only to dentistry, but also to the practice of medicine and surgery, is apparent. It is of the highest importance to the state that suffering and afflicted humanity shall not be subjected to the care and treatment of unlearned and unskilled persons. In its effort to prevent such a misfortune to its people, the state may adopt a standard for the test of fitness to engage in the work of what should be a learned profession. When that standard is adopted, those who assume to do the work of such a profession must prove their fitness by the test of such standard. Otherwise they violate the law, and can not be recognized by the state as practitioners of a lawful profession when they seek to follow it in an unlawful way. And where there was a proviso that the section of an act requiring an examination to practice dentistry should not apply to persons engaged in the practice of dentistry at the time of the passage of the act who were *bona fide* citizens of the state, the court says that it must be held to refer to the practice of dentistry as it was then recognized by law. It thinks that it should presume in this connection that, when the legislature used the words "persons engaged in the practice of dentistry," it did not intend to include in that class persons who had never complied with the existing law entitling them to engage in such vocation, and who had furthermore openly and continuously violated that law. The persons exempted from the examination were those who had complied with the law, for they were the only ones actually practicing dentistry, as that term must be construed in the light of lawful regulations. The subject of an act being to regulate the practice of a given profession, the court holds that the legislature may include in the act the means related to the subject for effecting the object sought.

Probability of Insanity as a Defense to Crime.—The Supreme Court of Iowa says, in the homicide case of State vs. Thiele, that the existence of disease in the brain of a living being is seldom the subject of demonstrated or direct proof. Of necessity, reliance must be placed on outward manifestations, and from these the inference drawn as to the condition of the brain. The conduct and speech of a party are not always the true index of mental capacity or incapacity. Cases of feigned insanity are not infrequent, and about all courts are able to do in most cases is to speak from the evidence as to the probability or improbability of the accused having been insane at the time under investigation. By saying insanity is probable is meant, as understood in common parlance and from the definition of lexicographers, that there is more evidence of insanity than against it, or better reason to believe the accused insane than to suppose him sane. In this case the jury were told, in effect, that, even if it were made to appear probable that the accused was insane, he must be held accountable for his act. And more, that such probability would not alone overcome the presumption of sanity. He must have gone still farther and introduced evidence to overcome this presumption, and then, in addition thereto, satisfy the jury of his insanity by a fair preponderance of the evidence. But the supreme court holds that there was error in this. It says that even if the presumption were to be accorded some probative force rather than treated as a mere rule concerning the burden of proof, it ought not to be offset in this way against the probability of the accused's insanity. Sanity is the normal condition, and the presumption that it exists goes no farther than the assumption, for the purposes of the trial, that the accused is not different in this respect from other men. The law does not undertake to measure the precise amount of evidence which, when undisputed, will rebut this assumption and justify the conclusion that a person is abnormal, save that it must be enough to convince the understanding. But the jury are not to be told that the presumption is of no consequence in weighing evidence, or that it is not to weigh the presumption of the accused's sanity against any measureable amount of evidence of insanity, for an appreciable weight of evidence is required to establish the existence of an abnormal condition of the mind. Not until the evidence indicates that the existence of insanity is probable, that is, is such as to render this conclusion more reasonable than a contrary inference, has the assumption that the party under investigation was in a normal state been overcome.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

May 30

1 *Primary and Recurrent Mammary Carcinoma Treated by the X Ray. William J. Morton.
2 *The Treatment of Purulent Conjunctivitis. Edgar S. Thomson.
3 *Notes on Cases Treated by Venesection. George P. Andrews.
4 *On the Active Principle of Rhus Diversiloba (Poison Oak). Carl Schwalbe.
5 *Reflex Symptom from Biliary Calculus. G. W. Squires.

1. **Mammary Cancer Treated by the X-Ray.**—Morton describes the utility of the *x* ray in cases of mammary cancer and reports a number of cases treated by this method. He uses no shield except for the hair of the head, eyebrows, etc., covering the nipple with a small metallic disc for part of the time. Dermatitis was intentionally carried to the purplish stage, followed by exfoliation and effusion of serum, and in some cases a purulent discharge. In all but one, complete recovery of the skin occurred in from one to four weeks. These areas of dermatitis have often occupied the entire skin area of one breast and axilla. The patients are frequently *x*-rayed from behind the scapula. He thinks this measure is of importance as the deep fasciæ of the muscles of the chest may be affected and the thorax offers but little resistance. The clavicle and ribs may shield infected areas behind the bones. He does not hope for good results unless dermatitis is produced. He has never overstepped the bounds and reached necrosis, but has escaped this only by adhering to the most rigid and exact technic as to time and exposure, distance of tube, force of, radiation, and number of treatments per week. The technic is fifteen minutes, 9 inches, high tube (corresponding to a six to ten inch spark gap), clear view of end of radius and ulnar at two feet, and three times weekly. The question of diagnosis is mentioned. He thinks the margin of error is small. Severe dermatitis should certainly be avoided. What is desired would seem to be to set up a mild leucocytosis with tissue reparation, and if in the case of a mammary and unbroken cancer the skin intervenes, this latter suffers a dermatitis lesion merely to enable the operator to set up a similar but lesser lesion in the deeper tumor area. He has often noticed in cases of primary carcinoma that whenever the patient complains of soreness of the skin, she also remarks that the tumor is unusually sensitive. In superficial or ulcerating carcinoma milder treatment with no dermatitis will suffice. It would not be wise, he thinks, to try to do with the *x* ray what might better be done by the actual or other cautery or by the knife, and the best future for the *x*-ray and phototherapy in general would be extreme conservatism and desistance from the invasion of surgical procedures which offer an alternative of relief or cure to the patient, superior to what the radiation treatment can offer. He holds it as generally admitted that it is advisable to follow up operated cases with radiation to prevent recurrences.

2. **Conjunctivitis.**—Thomson describes the various methods for meeting conjunctivitis according to its type. He thinks there is nothing that will supplant silver, but some of the new germicides seem of value where silver is not well borne. It is imperative in adult cases, and especially in gonorrheal conjunctivitis, to apply medical applications as early as possible. If the gonococcus once has a chance to penetrate the conjunctival tissue thoroughly the eye will probably be lost. In babies the results are not apt to be so serious, but in every case the application of silver should be as early as possible. It is impossible to lay down rules as to the limits of time when the abortive plans of treatment may be used, but he always attempts it when there is any prospect of success. If he sees the case two days after the infection and the swelling and discharge are not at their greatest height, he applies a 3 to 4 per cent. solution of nitrate of silver as thoroughly as possible, and meets the further indications as they arise, using a 2 per cent. solution as a daily application. When using a stronger than 2 per cent. solution it is well to neutralize with salt solution on account of the danger of staining of the cornea. Where silver irritates, as shown by the increased discharge of serum and a tendency to bleed, a 6 per cent. solution of protargol may be used. This is not non-irritating, though less irritating than silver. It is a valuable drug in ophthalmia neonatorum and wherever the conjunctival thickness is not enough to support nitrate of silver applications. It may be dropped in the eye twice daily. In other forms of purulent discharge due to the pneumococcus, Koch-Weeks' bacillus or other pus organisms, protargol in a 6 per cent. solution once daily is a most valuable germicide. It does not stain the tissues like the *nitrates, and it is* good practice to flood the corneal ulcer occurring in the course of a gonorrheal conjunctivitis with a 6 per cent. solution once a day. It does stain the conjunctiva if continually used. Argyrol, 25 per cent., meets the indications of pro

targol and is not irritating. It is less effective when an astringent is required, but as a non-irritating germicide it is ideal. The other indications for treatment in purulent conjunctivitis are best met on old lines, and the use of saturated boric acid solution, ice cloths to the lids, the use of argyrol, or protargol for corneal complications; in some few cases scarification in chemosis and cauterization of the cornea, where the chemosis is not severe, may be valuable means to prevent ulceration. Pure carbolic acid is the best cauterizing agent. When corneal infection appears hot-water applications are to be used for the purpose of stimulating the corneal tissues.

3. **Venesection.**—Ten cases of various conditions in which venesection was used, including pneumonia, eclampsia, asthma, dyspnea, etc., are reported by Andrews. In all the cases but one relief was prompt. The method cured in the sense that it tided over an emergency. He thinks there is possibly much value in this neglected therapeutic operation.

4. **Rhus Diversiloba.**—Schwalbe finds from his study of the cases as reported that there is little evidence of poisoning by diffusion of the toxin through the atmosphere. It must be directly applied and may be carried from one person to another by contact, but the fact that the skin of the face is the most susceptible and that it escapes in those cases where atmospheric contagion has been claimed, indicates that neglected contacts are really the causes of the trouble. Persons perspiring easily are more liable than others. Neutral soap will not clear out the hairs containing the poison; an alkali is required to neutralize it. A 1/10 to ½ per cent. solution of carbonate of potash applied several times a day is sufficient to protect everybody against the bad effects of this interesting plant.

5. **Biliary Calculus.**—Squires reports a case where severe pain and an eruption on the heel was the result of a biliary calculus and was immediately relieved on its removal *per vias naturales.*

Medical News, New York.

May 30.

6 Professional Discretion. The Medical Secret. (To be continued.) Prince A. Morrow.
7 *A Report on the Physics and Therapeutic Value of Cathode and Ultra-violet Rays; with References to the Electromagnetic Theory of Light. An Attempt to More Clearly Define the General Character of Those Recently-Introduced Agents in the Treatment of Cancer. Roswell Park.
8 *The Cure of Anal Fissure without Operation; Report of Eight Cases. S. Lewis.
9 *The Therapeutic Use of Suprarenal Gland in Certain Diseases of the Skin. Martin F. Engman and William P. Loth
10 On Simplicity in the Operation for Laceration of the Cervix Uteri. Louis Kolopinski.
11 Tuberculosis of the Larynx and Aspiration Tuberculosis of the Lungs Following Dermatitis Blastomycetes. Otto T. Freer.

7. **Radiotherapy.**—Park discusses the physical principles underlying radiotherapy, and offers the following conclusions as safely warranted in regard to the therapeutic effects of the *x*-rays and ultra-violet rays: 1. They afford methods of treatment for extremely new growths of limited area and superficial character, which, while not exactly certain, are extremely promising. 2. They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way. 3. They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed and inoperable cases than does any other method of treatment. 4. It will be found that the odor of putrefaction may often be suppressed by their use and the putrefactive process itself checked. 5. Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost entirely avoided. 6. More than this, they afford a supplementary method of treatment after operation by which the benefits of the same may be enhanced or enlarged. 7. It is not necessary to intermit such work as the patient may be engaged in in order to carry out the *x*-ray or phototherapeutic method of treatment. He remarks that too much must not be expected, and that what may be accomplished in deep cases is yet unknown. The *x*-rays have, however, been of apparent benefit in relieving pain, even deep seated.

8. **Anal Fissure.**—Lewis has found permanganate of potash applications in "anusol" suppositories night and morning curative in anal fissure. His worst case, in which all other means had failed, was cured by this treatment in ten days.

9. **Suprarenals in Skin Disease.**—Engman and Loth have tried suprarenal with good success in skin disorders dependent on vasomotor disturbance, pruritus, urticaria and lichen urticatus. They find a certain cumulative action on the nervous system that makes them use the drug with caution. It caused in repeated doses, 5 gr. 3 td., tremor of the extremities, aggravated by increased doses. For a child under 4 they give ½ gr. 3 td., gradually increased to 2 gr. Between the ages of 4 and 12, 1 gr., gradually increased to 3 grs. Above 12 the beginning dose may be 2 gr., increasing gradually to 6 gr.

Philadelphia Medical Journal.

May 30.

12 Historical Sketch of Vaccination. Charles W. Dulles.
13 *The Treatment of Fracture of the Neck of the Femur at Bellevue, St. Vincent's and New York Hospitals. Joseph B. Bissell.
14 *A Case of Ulcerative Endocarditis Involving the Pulmonary Valve and Causing Perforation of the Ventricular Septum, Gangrene of the Nose and Ears, Multiple Infarcts in the Kidneys, etc. Henry M. Fisher.
15 A Report of a Case of Malignant Gonorrheal Endocarditis, with Specimens. C. J. Habhegger.
16 Preliminary Report of an Operation for Abdominal Pregnancy of Twenty-one Months' Duration. Charles P. Noble.
17 *Uterine Fibroma Near the Menopause. George E. Shoemaker.

13. **Fracture of the Neck of the Femur.**—Bissell describes the methods of treatment used in several hospitals in New York City. In St. Vincent's there were few of these cases in the year 1900, and only 41 cases since that time. The method used is a fracture board under the mattress, a Hamilton long side splint and Buck's extension with a weight, usually rather heavy, sufficient to reduce the shortening down to one-half inch or under. The Hamilton splint was removed frequently comparatively early, often at the end of the fourth or fifth week. No plaster dressings have been used during the three years. No deaths are recorded. In Bellevue 241 cases are reported from Jan. 1, 1900, to Jan. 1, 1903. The method employed is the fracture board, Buck's extension and the long Hamilton splint as the usual means. The weights were somewhat less than those at the St. Vincent's. Only in one case was the plaster-of-paris spica used from the beginning of treatment to the end. In a number of other cases, however, the plaster was applied after the Hamilton splint had been removed and shortening reduced as much as possible and no amount of weight seemed to reduce it further. In the New York Hospital there were 34 cases recorded. The usual treatment in almost every case was to apply the Hodgen splint. The fracture boards for the bed and occasionally Buck's extension were used with sand bags and moderately heavy weights applied until shortening was reduced as much as possible. The longest period a patient was kept in bed was sixteen weeks and the shortest six. Fifteen of the 34 cases were discharged as cured, 4 as unimproved, 14 as improved and 1 died from pneumonia occurring within twenty-four hours after admission. In none of the hospitals was any operation performed to unite the fractured surfaces, to remove a detached head or to carry on or assist in any manner the treatment. The largest percentage of cures was in the New York Hospital, which speaks well for the methods there employed. According to the author's experience, bed sores are a common intercurrent trouble in these cases, though this does not seem to be borne out by the histories as recorded in these hospitals. He thinks the difficulty of meeting the indications of perfect coaptation and immobilization of the fractured bone, together with attention to the health and comfort of the patient, can not well be met by the methods that have been employed. Coaptation and immobilization are perhaps, to a certain extent, met by the Hodgen splint, but much more is required, and the use of a hip splint, which would allow the patient to be up and about, and fixation by plaster of paris, are the only alternatives to an open operation down to the seat of the fracture and an accurate securing of the fragments by mechanical means, which would seem to him desirable. He holds that the risk of surgical operations in these cases is not so great as that of the tedious and slow and unsatisfactory treatment without cutting.

14 This article appeared elsewhere See THE JOURNAL of April 18, title 53, p. 1105.

17. Uterine Fibroma.—Shoemaker has operated on a large number of cases near the menopause, several of which he reports He holds the danger of operation in cases of this class, while greater than in simple abdominal sections, is not very great The mortality should not exceed 6 per cent, and it is largely due to complications such as pyosalpinx, recurrent peritonitis or the effects of hemorrhage, all due to delay

American Medicine, Philadelphia.

May 30.

18 *A Clinical Report of Nine Cases of Friedreich's Disease Hereditary or Family Ataxia So-called, with Comment on Noteworthy Symptoms Joseph Collins
19 *Present Status of Congenital Dislocation of the Hip and the Bloodless Reduction Virgil P Gibney
20 *The Forcible Reposition of Congenital Luxation of the Hip Gwilym G Davis
21 Etiology and Treatment of Retrodeviations of the Uterus Charles A Robertson
22 Strongyloides Intestinalis in Texas with Report of a Case John T Moore
23 *Streptococci Infections Leonard K Hirshberg

18 Friedreich's Ataxia—Collins describes the typical form of Friedreich's ataxia and notes the types that have been described He gives two cases which he thinks illustrate the fact that the disease conforms to the classic type with some frequency He calls attention to the uniformity of the clinical manifestations and also to some uncommon clinical features, such as preservation of the tendon jerks, pes planus, manus cavus and an uncommon complication, the Menière symptom complex, which occurred in one of the cases reported

19 Congenital Dislocation of the Hip.—Gibney reviews the treatment of congenital hip joint disease, and especially the effects of the Lorenz method He considers stretching of the capsule an element of danger and unnecessary The number of cases in which paralysis of the quadriceps femoris and leg muscles have developed indicates this He offers in conclusion the following few points that seem to him to be paramount

1 Do not rest content in a case of hip lameness in a young child until you have made a thorough examination of the patient and have obtained a full history of the case 2 The diagnosis once established aim to effect a reduction before the sixth or seventh year It is fatal to postpone operation 3 In patients beyond the age limit fortify yourself with a Roentgen ray picture in order to determine the exact position of the head the shape of the same and the relationship which the neck sustains to the shaft. 4 Do not make long attempts at reduction in patients over 10 5 Bear in mind the dangers which Dr Lorenz himself has warned against namely, too extensive laceration of the soft parts, paralysis which may or may not yield to time and treatment, the fracture of the femur or the pelvic bones, rupture of an artery, sometimes the femoral

20 Congenital Dislocation of the Hip.—Davis criticises the Lorenz method, holding that it is unnecessarily severe and has developed dangerous features, and maintains that the comparatively mild and gradual methods of Paci are preferable Forcible traction, he holds, has no place in immediate reduction of congenitally luxated hips, and it is mainly responsible for the traumatisms that occur If we are to avoid them we must adhere more closely to the original teaching of Paci, which consists simply in the application of the circumduction method of reducing traumatic luxations, by which the thigh is flexed on the abdomen followed by downward pressure on the knee with abduction, external rotation and gradual extension The pressure is made on the trochanter posteriorly while the limb is carefully extended Abduction is afterwards maintained to an extent sufficient to prevent the head from escaping from its new position He prefers the fixation of the thigh on the abdomen to fixation at right angles with the body He says that rather than resort to the great force now at times employed, he believes it would be much better to incise and clear a way for the head of the bone

23 Streptococci Infections.—Hirshberg reviews the facts in regard to the various pathogenic streptococci, and holds that there is little warrant, with our present means of differentiating bacterial species, for dividing the streptococcus into eighteen or more species as is done. From the multiplicity of pathologic processes in which the streptococcus is invariably found, it is quite likely that there are distinct species or at least varieties of streptococci involved, but our present means of separating them proves it is open to considerable doubt

New York Medical Journal.

May 30

24 *Clinical Observations on Backache Robert W Lovett
25 *Cocain Herniotomy Alexander Lyle
26 *The Essentials for Aseptic Labor A Ernest Gallant
27 The Eye in Its Relation to General Disease Nathan D McDowell
28 *A Supposed Sarcoma of the Kidney Cured by X-ray Treatment Charles H Richmond
29 *Notes on Two Cases of Congenital Tuberculosis Charles G Cumston
30 *Heredity and Tuberculosis Maurice Packard and Lester L Roos
31 *Chronic Pneumonia F Paller

24 Backache—From an orthopedic standpoint certain well-defined types of backache present themselves which are divided roughly into two groups by Lovett, those due to causes existing in the spine itself and those due to external causes The first of these are either mechanical or static, due to faulty attitude or the result of injury or inflammation Among the first Lovett mentions faulty spinal attitude, in which the extra strain is borne by certain ligaments not calculated for them, hence pain follows from continuous ligamentous strain, especially when associated with stretched spinal muscles In round shouldered, lax spined young woman pain is not infrequent and is familiar under the name of irritable or neurasthenic spine, and is generally localized in one or two points, is apt to be severe and aggravated by exercise Stiffness comes on after a while, and in old cases the differentiation from Pott's disease and osteoarthritis may be difficult. The condition tends to grow worse with periods of improvement, and the cure lies in the development of the spinal muscles and the acquirement of an erect attitude by gymnastic exercises, at first mild, later increasing in force, following the line of the "setting up drill" of fthe military recruit. The physician must be sure of his diagnosis, for the same treatment is not suitable for Pott's disease. In lateral deviation of the spine, when due to a shorter leg on one side, pain is not uncommon and is often situated in one or the other of the sacroiliac joints, or in the loin or around the scapula. As far as Lovett's experience goes, the pain is on the convex side of the curve rather than on the compressed side. The correction of the shortened leg by a thick sole will in many cases do away with the backache The causes due to injury or trauma include sprains of the back which are often serious, far more so in their symptoms than would be suggested by the anatomic conditions. In some cases it is impossible to make an off hand diagnosis from Pott's disease. Instead of being put to rest like an injured ankle, it is the rule that the parts are kept in action and treatment is, therefore, embarrassed. In chronic or acute sprain absolute rest and fixation are necessary, or their restricted use There is also a persistent backache without obvious cause, of which he has seen two cases The patients were not neurasthenic, they stood well, their muscles were good, and they had suffered no injuries, and in both cases the condition was obstinate. In conclusion he mentions Pott's disease and arthritis deformans and the causes of backache existing outside the spine. Three conditions of the foot are mentioned, such as flatfoot, which is not common in private practice, pronated foot, which is more common, the weight of the body being transmitted diagonally through the arch instead of straight down, and pain and irritability result This is most commonly called flatfoot, but it outnumbers the cases of real flatfoot many times over. Another condition is what is called contracted foot, which is very little known and but imperfectly understood. It is characterized by shortness of the muscles of the back of the calf and their stretching is necessary in the treatment. Backache is a common accompaniment The pain from these three conditions is generally in the small of the back and is aggravated by stooping or standing. It also results from walking The real flatfoot and pronated foot are easily treated by foot plates, and the backache disappears if this is the cause In case of contracted foot, stretching of the calf muscle is necessary, and the under side of the foot must be supported by a pad or a short steel plate The arch of the foot must be correctly supported

25. Cocain Herniotomy.—Lyle describes his method of operating under cocain, insisting on the importance of keeping the patient unaware of what is being done. It consists in blocking off the nerves by injection, careful dissection and practically the Bottini operation with the exception of the treatment of the sac, in which he follows the Macewen method, which, as we know, retains the sac, and pulling it with a purse-string suture or No. 4 catgut through the internal or deep ring, anchors it there by carrying this suture through the abdominal muscles and skin about an inch above the upper extremity of the skin incision, there winding the end of the suture around a small piece of sterile gauze. This leaves an obstruction in the internal ring. The advantages claimed for the method are, that we are saved the danger of general anesthesia to the heart, lungs and kidneys, that we cut no nerves, and therefore do not impair their function, and ligate no vessels; there is no shock, nausea or straining. The patient continues on the full diet and can enjoy a hearty meal immediately after the operation; all cases have healed by primary union. The patient is confined to bed for three weeks, after which time he may be about and return to work.

26. **Aseptic Labor.**—The essentials of aseptic labor are given by Gallant as follows: (*a*) a good-sized hand bag, to be used for this purpose and no other; (*b*) stocked with the necessary drugs; (*c*) steam sterilized gauze, gown and cotton ball sponges (several sets of which must be kept on hand); (*d*) hand brushes, silkworm gut, rubber gloves, and catheter, ready to be boiled in plain water; and (*e*) a set of metallic instruments to be boiled in soda solution when needed. As a time-saving measure these supplies, dressings and instruments should be arranged on a table standing conveniently near the accoucheur's right hand, and the drugs placed in a row on the mantel, to obviate soiling the bag and infecting the operator's hands. The hand cleaning can best be accomplished (without antiseptics) by the liberal application of the tincture of green soap, rubbed thoroughly into the dry hands and arms (two or three coats), working the soap well under the nails and between the fingers; then, when they are thoroughly coated and dry, scrubbing with a stiff brush, in running water, until all traces of soap have been scrubbed away. Before applying the forceps or introducing the hand into the vagina, cut short the hair, soap well, and scrub the vulvoanal region, the thighs and abdomen as carefully as you have the hands. Put on rubber gloves if the hands recently have been in contact with septic wounds or pus from any source.

28. **Sarcoma of the Kidney.**—In the case reported by Richmond, the patient had a swelling which crowded the liver and organs forward and inward. The posterior dulness reached as high as the eighth rib. There was a great loss of strength and flesh. The diagnosis made was that of sarcoma, which, however, was not verified by any exploratory operation. Night sweats were frequent, the patient became very weak; the tumor extended downward as far as the crest of the ileum. The treatment was the *x*-ray for nineteen consecutive days. At the end of that time the temperature had decreased to normal, night sweats were lessened; the tumor had apparently ceased to grow and seemed softer and the patient was generally improved. She was then sent to the hospital, where the treatment was continued, and at the end of nine weeks the growth had entirely disappeared as far as could be determined by bimanual examination. At the present time, April 1, 1903, she seems quite well, though she has not fully regained her powers of endurance. He intends to continue the *x*-ray treatment two or three times weekly for the next few months as a precautionary measure.

29. **Urogenital Tuberculosis.**—Cumston describes two cases illustrating the ascending and descending forms. He holds that the ascending form is generally more favorable than the descending type, because operative treatment is more easily accomplished, and also from the fact that an earlier diagnosis is far easier to make.

30. **Heredity and Tuberculosis.**—Packard and Roos review the literature as to the hereditary transmission of tuberculosis, and claim that it is not only a possible, but an important mode of transmission. They insist on the danger of transmission by heredity and the criminality of marriage of tuberculous patients. Experimental evidence by Friedmann shows that tubercle cultures injected into the vagina directly after sexual intercourse in rabbits produces infection of the ovum, which shows that sperm highly charged with tubercle bacilli may produce the same trouble. The authors also think that the tuberculin reaction is perhaps rather uncertain as a diagnostic method. Negative results are too frequent.

31. **Chronic Pneumonia.**—Palier reports a case which came on with an acute onset followed by very slow recovery lasting for several months. The condition, he thinks, is often mistaken for consumption, and change of climate and exercise advised, which is a mistake.

Cincinnati Lancet-Clinic.

May 30.

32 *Diagnosis and Treatment of Empyema. With Report of Cases. C. M. Lenhart.
33 Subscription Problems. C. F. Taylor.
34 Surgery of the Prostate, Pancreas, Diaphragm and Spleen (continued). B. Merrill Ricketts.

32. **Empyema.**—The important points in the operative treatment of empyema are, according to Lenhart: 1. An early diagnosis and operate as soon as pus is discovered. 2. In operating be sure you open the pleural cavity in the most dependent part to secure good drainage.

St. Louis Medical Review.

May 30.

35 Presentation Address to Dr. Young H. Bond. Robert C. Atkinson.
36 The Use of the Obstetric Forceps in Abbreviating the Second Stage of Labor. William H. Stauffer.

Quarterly Journal of Inebriety, Hartford, Conn.

April.

37 *Alcohol in Surgery. Pearce Gould.
38 *The Value of Surgery in Certain Cases of Inebriety. H. A. Rodebaugh.
39 *On the Treatment of Dipsomania and Chronic Alcoholism by Hypnotic Suggestion. J. Milne Bramwell.
40 *Insanity from Hasheesh. John Warnock.
41 Inebriety in Ancient Egypt and Chaldea. T. D. Crothers.
42 *Static Electricity in the Treatment of Morphinism. A. J. Pressey.
43 Food and Poison. Max Kassowitz.
44 Alcoholism and Crime. P. M. Lightfoot.
45 Tobacco Poisoning. A. C. H. Friedmann.

37. **Alcohol in Surgery.**—Gould has studied the use of alcohol in surgery and has found it of very limited utility. It seems to impair convalescence and he would not place it among the means of primary value in the treatment of shock and collapse. It is injurious in cases of cancer, though there are special circumstances in which it may be used with good effect for securing sleep or promoting appetite. In conclusion, he remarks that it may not be the best treatment to absolutely withdraw alcohol from those that have been used to it as the breaking up of a life-long habit may in some instances be injurious.

38. **Surgery in Inebriety.**—The theory under which surgery may be advantageous in inebriety proposed by Rodebaugh is that certain conditions may interfere with what is called the nerve force and reduce the resistance, and he reports a case where operations for hemorrhoids which were a source of irritation leading to nervous waste, for phimosis and for deflected septum were efficient in combating the alcohol and morphin habits.

39. **Hypnotism in Alcoholism.**—Bramwell reports cases where hypnotism has been used in curing the alcoholic habit and dipsomania. The important points of treatment are that the patient must be willing to be cured, and must be susceptible to hypnosis, though deep hypnotism is not requisite for good results. In dipsomania the treatment ought to be begun at the quiescence of an attack and aim at retarding or weakening the next attack. When stimulants are taken continuously the patient should be encouraged to discontinue gradually or at once. The management of the patient before suggestion has taken effect is important. He should always be under the supervision of some trustworthy person who can advise and help him to overcome the temptations. Actual restraint is useless and the moral effect is always bad. The operator must be persevering and not easily discouraged; many persons relapse once or twice during treatment. The distaste for alcohol ought to be suggested as well as the abolition of the craving of it. The patient should look forward

with the idea that he can never be a moderate drinker, that his only alternative is total abstinence or the gutter. Even when the craving disappears quickly the hypnotism should be continued regularly for a month, and if the patient can be observed for six months so much the better. The object of treatment is not only to cure the disease, but to strengthen the will: if the patient can not control himself it is a failure. Bramwell thinks his results are encouraging, but he hopes for still more satisfactory ones.

40. **Hasheesh Insanity.**—The director of the Cairo asylum describes his experience with hasheesh insanity, which seems to be more frequent in that country than elsewhere. There is a close analogy between the condition of certain hasheesh habitués and dipsomania. He notes the following special points: 1. Suicidal intentions are common among alcoholics, rare among hasheesh cases. But we must bear in mind that most of the latter are Mohammedans, among whom suicide is rare. In Egypt hasheesh seems to be a more important factor in the production of insanity than alcohol is in England, and as a cause of crime of equal importance. The use of hasheesh, unlike that of alcohol, is not accompanied with any characteristic anatomic lesions and no physical disorders of note are met. The only exception to this is the staggering gait of hasheesh intoxication and delirium. In general only the physical disorders and lesions met with in idiopathic insanities are encountered.

42. This article appeared in The Journal, Jan. 10, 1903.

Kansas City Medical Record.

May.

46 Inflammation of the Pelvic Organs Involving the Vermiform Appendix, with Report of Cases and Exhibition of Specimens. C. M. Fulton.
47 *The Operative Treatment of Hernia. Robert McE. Schauffler.

47. **Hernia.**—The operative treatment of hernia is reviewed by Schauffler, who insists on the importance of radical operation for cure. The mortality is slight and constantly being reduced, and unless there are objections on account of age, either too early or too advanced, or mechanical difficulties, as in very large hernia with danger of increasing intra-abdominal pressure by reduction and special idiosyncrasies to anesthetics, the results are fairly good. The operator should be thoroughly familiar with anatomy. Antisepsis should be rigid and the technic should be dry, with little handling and careful control of trifling hemorrhage. The Bassini operation is the best for inguinal hernia. He, however, calls attention to a few points. Whatever the skin incision, let the incision in the external oblique aponeurosis be a full finger's breadth from Poupart's ligament, so that it may be reflected in a lower as well as an upper flap. Have the suture material absorbable, kangaroo tendon, reindeer tendon or chromicized catgut. Suture the conjoined tendon, which is rather a muscle edge than a tendon, to Poupart's ligament with broad bites of muscle and shallow but firm ones in the ligament, taking care to retract well the lower external oblique flap which is continuous with Poupart's ligament. Do not tie too tight, lest the muscle atrophy. The cure depends on the firm union of the approximated parts, not on any permanent strength of the suture material. The crucial point in the suturing is to have the first suture, or the first two if one is placed above the cord, give snug approximation of the new internal ring to the cord without unduly constricting it. The aponeurosis of external oblique should be overlapped if possible, at least nicely approximated, without the sutures being very tight. This tissue is poorly nourished and easily sloughs. In femoral hernia the greatest difficulty is to distinguish the sac and true hernial contents from the tumor of true peritoneal fat which so often precedes or surrounds it. Never dissect a mass of fat blindly; it may have a little "glue finger" of intestine or bladder as its center. Almost any closure is successful in a femoral hernia, but the position of the femoral vein must always be kept in mind. In umbilical or ventral hernias in small patients, not very fat, the prognosis is good. With large or irreducible hernias in fat people with adhesions and attacks of inflammation or partial strangulation frequent it is much more serious. It is often wise, he says, to circumscribe the mass, including redundant skin, and come down on normal peritoneum just beyond the hernial opening and then reduce as much as possible, working from within, and resect the remainder of the omentum with part of the sac and skin in one mass. In the closure the peritoneum is stitched flat, as in laparotomy, and the abdominal wall closed in layers, taking special care to approximate the recti muscles. Small hernias in the linea alba or lateral walls are easily cured by such closure as is indicated by ordinary surgical common sense. Post-operative ventral hernias are treated along the same lines. In strangulated hernia the condition is more serious. Even apparently successful taxis is attended with considerable mortality. Recent statistics favor resection rather than colostomy. There are many cases of hernia imperfectly controlled by a truss or retained at the cost of much discomfort where operation would be better and the danger of taxis is a very serious one.

University of Pennsylvania Medical Bulletin, Philadelphia.

May.

48 *Sensations Interpreted as Live Animals in the Stomach. Alfred Stengel.
49 Syphilis of the Lungs Simulating Pulmonary Tuberculosis. Alfred Stengel.
50 Methods of Clinical Examinations, Embodying the Practical Course Given to the Third Year Students of the University of Pennsylvania. C. Y. White.

48. **Live Animals in the Stomach.**—Stengel has investigated the alleged cases of this kind and reports one case where the belief of live animals in the stomach was maintained by the patient. He says, in view of these cases and others like them, he is convinced that the cases of supposed invasion of the stomach by various animals are often instances of gastric disease with misinterpreted sensations. These are not to be treated on the theory that they are pure delusions, as they are, in many cases at least, instances of organic gastric disease which may be relieved by appropriate treatment.

Annals of Ophthalmology, St. Louis.

April.

51 *Report of Cases of Extensive Symblepharon and of Shrunken and Obliterated Cul-de-Sacs, Relieved by Skin Grafting, with Description of the Operation. H. W. Woodruff.
52 *Anomalous Direction of Retinal Vessels on Emerging from and Entering Optic Disc. E. F. Snydacker.
53 Report of a Case of Toxic Amblyopia from Coffee. P. B. Wing.
54 Cure of Pulsating Exophthalmos by Ligature of the Common Carotid Artery. H. V. Würdemann.
55 Four Eye Injuries with Introduction of Foreign Substances Not Suitable for Removal by Magnet. M. W. Zimmerman.
56 A Case of Acute Glaucoma, with Iritis, Following Cataract Extraction. James Bordley, Jr.

51. **Symblepharon.**—Woodruff's method of treating these cases is by skin grafts. He thoroughly cleanses all the parts and flushes the field with boric acid solution. If pseudopterygium is present, it is first dissected through, the lid thoroughly freed from its attachment to the eyeball and the cul-de-sac made large in all dimensions. Cicatricial bands should be removed entirely. Bleeding is checked by hot water. A plate is now cut from a sheet of block tin, which will snugly fit into the new-formed cul-de-sac. The corners are rounded off and the edges smoothed with the scissors or file. The plate may be cut out in the center to prevent rubbing on the cornea, if necessary. Four holes are made for the sutures, two at the outer and two at the inner angle of the plate, to correspond to the lid margin. A thin layer of skin is removed about one-third wider and more than three times as long as the plate. This is taken from the inner surface of the arm flattened by pressure. The plate and graft are then pushed into the cul-de-sac and sutured to the lid near its margin, tying the ends of the sutures over small rolls of gauze. The lids may be sewed together and dressed with gauze and bandaged in the usual way. The eyes should be bandaged as long as the plate is in place, and absolute quiet maintained. The plate is removed in four days and more freedom allowed the patient. Six cases are reported. He thinks the method is the best up to date. The white surface of the graft may be quite noticeable for awhile and objected to, but the graft can be placed at once where it is wanted, and is held down in the very bottom of the artificial cul-de-sac until it has adhered, and approximation and rest are secured by the plate.

52. **Anomalous Direction of the Retinal Vessels.**—This peculiar anomaly of the retinal vessels described by Snydacker

consists in the superior and inferior temporal veins and arteries, on emerging from the optic nerve, proceeding directly toward the nasal portion of the retina as if that were their destination; afterwards turning towards the temporal portion where they were distributed as usual. He thought this was but a coincidence with the defective sight in his first patient, but he shortly afterwards met with other cases showing the same peculiarities. There was also some congenital deficiency present besides the anomalous vessel exit, and there were also marked errors of refraction, most frequently myopic astigmatism. He finds very little mention in the literature of this condition.

Ophthalmic Record, Chicago.

May.

57 Confessions of a Traveler. (Continued.) Albert B. Hale.
58 Paralysis of External Recti Muscles Appearing After a Blow on the Skull. Edward Lauder.
59 A Simple Test for Stereoscopic Vision. Frederick H. Verhoef.
60 *Conditions and Diseases of the Eye Which Make an Enucleation Necessary. A. J. Erwin.

60. **Enucleation of the Eye.**—The conditions requiring enucleation are enumerated by Erwin as follows: 1. A blind eye which menaces a sound one. 2. A nearly blind eye which has set up sympathetic disease should not be removed, and every operator should keep this distinction in mind. 3. Every lacerated eye with a ragged wound in the ciliary region should be removed before it has time to set up sympathetic disease, and also 4, every eye which contains a growing tumor before it involves the orbital tissue. Lastly, he says, eviscerate early in panophthalmitis. These indications are discussed in detail. The second rule is important, that a diseased eye with some sight which has already set up sympathetic disease in the other eye will not save the other eye by its removal, and it is worth while to save what sight it has. Not every ciliary laceration warrants enucleation. A clean rent that has healed promptly without contraction is fairly safe so long as it remains free from irritation, but ragged laceration calls for enucleation before it has had time to cause disease of the other eye. As regards the operation, he thinks a careful study of the conditions present in each case is required. With threatenel sympathetic disease of the other eye, simple enucleation where applicable would be judicious; also, in panophthalmitis simple evisceration would be best and easiest, and enucleation, not evisceration, should be done in all cases of interocular tumor, as they usually involve the sclera. Evisceration should always have preference where there are adhesions of the sclera or capsule unless contraindicated. He reiterates that where there seems to be an immediate danger of sympathetic ophthalmitis simple enucleation or evisceration should be done, but the demand for the best cosmetic effect now requires in all other cases the Lang or Mules operation where possible. The technic of the two operations is described.

The Laryngoscope, St. Louis.

May.

61 *Remarks on the Etiology of Hypertrophic Rhinitis. E. L. Shurly.
62 *Rhinoplasty by a New Operation. O. B. Douglas.
63 *Malignant Tumors of the Nasopharynx. Francis J. Quinlan.
64 *Middle Ear Diseases in Tuberculosis. Robert Levy.
65 *The Report of a Case of Pin in the Larynx and Its Removal by an Original Method. Otto J. Stein.
66 Report of Two Cases of Laryngeal Paralysis Due to Aortic Aneurism. Hal Foster.
67 Superheated Medicated Air in Diseases of the Ear and Nose. Joseph C. Beck.

61. **Hypertrophic Rhinitis.**—Shurly discusses the etiology of this condition, which he largely attributes to defects of development owing to evolution of the nasal region in the higher races. The upper nasal passages of the Caucasian are only abnormally normal, and this lack of proper structure tends to the production of the condition. Other causes that may occasion it are attacks of measles, diphtheria, scarlet fever, etc., which every child must go through, and still another cause is the artificial mode of living, especially of the well-to-do class. Lastly, he believes that a new etiologic factor will arise in the prevalent consumption of fake foods and nostrums, and consequent abuse of the metabolic functions.

62. **Rhinoplasty.**—The new operation described by Douglas was devised in a case of depressed fracture of the bones, where he found he could not raise them from below, and in which he made an open mask for the face with a sort of bridge running down the course of the nose. Working from within he supported the adhesions and sutured the bones with sutures which were passed out through a common opening in the bridge of the nose and fastened to the bridge of the mask, thus supporting the outlines of the nose in a normal position. The result was good.

63. **Malignant Tumor of the Nasopharynx.**—Quinlan reviews the literature of these growths and finds that there is sufficient evidence to show that aside from the pseudo-malignancy of certain rapidly growing fibromata there is the possibility of true sarcoma and no reason, a priori, to exclude carcinoma from this region. The type usually described corresponds to adenocarcinoma. As regards treatment, he does not give a hopeful opinion. The prognosis of malignant growth in the nasopharynx is very unfavorable. The character of the tissues favors rapid malignancy, and the results have only been very slightly modified for the better. This is largely due, however, to the fact that the condition is not recognized early enough. When patients are in middle life and when symptoms are suspicious, careful examination should be made. Every day of delay makes the prognosis worse and temporizing measures are almost criminal.

64. **Middle-Ear Disease in Tuberculosis.**—Levy concludes his paper with the following summary:

1. Any of the usual aural affections may affect the tuberculous as well as the non-tuberculous. 2. The usual modification of an acute otitis in a tubercular subject is manifested in the course the disease pursues. 3. It is a doubtful question whether the *Bacillus tuberculosis* is present as a distinctly etiologic factor or as an accident. 4. Comparatively few cases of tuberculosis in children and relatively few instances of bone tuberculosis are met with in Colorado. 5. Clinical tuberculous otitis occurs with moderate frequency in Colorado, being secondary to lesions of the respiratory organs. 6. Tuberculous otitis may develop when the general symptoms of tuberculosis have been arrested and the patient's condition is unusually good. 7. Tubercle bacilli may find their way into the middle ear through the Eustachian tube, through the lymph channels of the blood currents. 8. Unusual care must be exercised in the application of the nasal douche in tuberculous patients. 9. The discharge may be arrested, but not permanently, as a rule. 10. It must be exceedingly rare for miliary tuberculosis to develop from an otitis as the focus of infection. 11. Through and through irrigation with tubercle-bacilli destroying agents is of prime importance in the treatment. 12. General and climatic treatment must be conscientiously carried out.

65. **Pin in the Larynx.**—In the case reported a pin was firmly fixed across the larynx and could not be removed by forceps without too extensive laceration of the tissue. Several methods were suggested, but the plan finally adopted was to seize the pin at the center with a hook, then by pressing it double it up. A canula, bent at the proper angle to enter the larynx, was very firmly fixed at right angles to a heavy handle, carrying a lever, to whose upper end was fastened the stiff steel wire that passed through the canula. This wire terminated in a hook at its distal end. The hook at the end of the canula was easily carried around the exposed part of the pin and continuing to hold the instrument in the same position pressure was made on the lever of the handle and the pin bent back and jack-knifed itself so that it was drawn out of the tissue and up into the canula, without the patient knowing anything had been done. The recovery was complete and rapid.

Texas Medical Journal, Austin.

May.

68 *The Rational Treatment of Snake Bites and Others with Adrenalin Chlorid. R. Menger.

68. **Snake Bite.**—Menger suggests the use of adrenalin in snake bite on account of its effect as a heart stimulant. He has had no experience with it, however, but simply offers it as a proposition.

Detroit Medical Journal.

May.

69 *On the Blood Pressure in Surgery. George W. Crile.
70 Some Points in the Diagnosis and Treatment of Diseases of the Nose and Throat, and Their Relation to General Medicine. Willis S. Anderson.
71 Acute Dilatation of the Stomach. W. M. Harvey.

69. **Blood Pressure in Surgery.**—The following is a summary of the results of Crile's study of the blood pressure in shock:

Surgical shock is an exhaustion of the vasomotor center. Neither the heart muscle, nor the cardio-inhibitory center, nor the cardio-accelerator center, nor the respiratory center are other than secondarily involved Collapse is due to a suspension of the function of the cardiac or of the vasomotor mechanism In shock, therapeutic doses of strychnin are inert, physiologic doses dangerous or fatal. If not fatal, increased exhaustion follows. There is no practical distinction to be made between external stimulation of this center, as in injuries and operation, and internal stimulation by vasomotor stimulants, as by strychnin Each in sufficient amount produces shock, and each, with equal logic, might be used to treat the shock produced by the other Stimulants of the vasomotor center are contraindicated Cardiac stimulants have but a slight range of possible usefulness, and may be injurious In collapse, stimulants may be useful because the centers are not exhausted Saline infusion in shock has a limited field of usefulness. In collapse it may be effective. The blood tolerates but a limited dilution with saline solution Elimination takes place through the channels of absorption Its accumulation in the splanchnic area may be sufficient to fix the diaphragm and the movable ribs, causing death by respiratory failure Saline infusion, in shock, raises, but can not sustain the blood pressure Adrenalin acts on the heart and blood vessels It raises the blood pressure in the normal animal, in every degree of shock; when the medulla is cocainized, and in the decapitated animal It is rapidly oxidized by the solid tissue and by the blood Its effects are fleeting; it should be given continuously By this means the circulation of the decapitated dog was maintained ten and one half hours In excessive dosage there is a marked stimulation of the vagal mechanism The pneumatic rubber suit provides an artificial peripheral resistance without injurious side effects, and gives a control over the blood pressure within a range of from 25 to 60 mm mercury. Physiologic rest, posture, heat, artificial peripheral resistance, guarded use of adrenalin and particularly when there has been considerable hemorrhage normal saline solutions are the most reliable means of combating shock—but prevention is the best cure By combined use of artificial respiration rhythmic pressure on the thorax, and adrenalin injected into the jugular vein animals which were apparently dead as long as fifteen minutes were resuscitated The control of the blood pressure is almost equal to the control of life itself

His paper concludes with a study of the different conditions for blood pressure determination after various operations

Dominion Medical Monthly, Toronto.

May

72 The Economic Aspect of the Tuberculosis Problem in Canada A J Richer
73 *The Administration of Hyoscin Hydrobromate Before Ether Anesthesia E A Robertson
74 Hemiplegia Complicating Pregnancy Report of a Case Lewis H Marks
75 Oxyuris Vermicularis in the Appendix Ernest A Hill

73 Hyoscin Hydrobromate Ether Anesthesia.—Robertson recommends the use of 1/100 of a grain of hyoscin hydrobromate one half hour before the administration of ether. The patient is calm and dozes off with quiet respiration, the mouth dry, takes ether without struggling and the stage of surgical anesthesia is quickly reached. There is little or no secretion of fluid from the mouth or respiratory tract, no muscular rigidity or cyanosis and a very small quantity of ether is required. There is no vomiting or obstruction to the respiration by secretion of fluid in the air passages The patient regains consciousness rapidly, but is quiet and sleepy for the first twelve hours after the operation There is some dryness of the mouth and thirst He has never seen any dangerous symptoms follow the use of the drug and he thinks that it prevents or lessens many of the disagreeable or dangerous effects of ether

Northwestern Lancet, Minneapolis.

May 15

76 Pathologic Laws H D Valin
77 Bursitis Subdeltoidea Acuta E Klaveness
78 Reflex Cough Due to Irritation in the Upper Respiratory Tract. William R Murray
79 The Hygiene and Treatment of the Voice J G Parsons

Virginia Medical Semi-Monthly, Richmond.

May 22

80 The Tuberculin Test in the Diagnosis of Tuberculosis in Man Boyd Cornick
81 Some Suggestions of Interest to Physicians on the Scientific Aspect of the Race Question, with Particular Reference to the White and Negro Races James Orr

Medical Fortnightly, St. Louis.

May 25

82 Some Points in Regard to Formaldehyd Disinfection R B H Gradwohl
83 Hydrotherapy T A Wakely
84 Mastoid Disease C A Boice.
85 Surgery of the Diaphragm B Merrill Ricketts
86 Painful Menstruation W L Downing

Canadian Journal of Medicine and Surgery, Toronto.

June

87 Intestinal Obstruction Produced by Bands of Adhesions J F W Ross
88 Erythema Circinatum—Acne Varioliformis Alexander McPhedran
89 Phenic Acid in Pyogenic Processes Thomas H Manley

Columbus Medical Journal.

May.

90 Preventive Medicine. Edmund C. Brush.
91 Adrenal Extract in Urethral Hemorrhage M L Heidingsfeld.
92 Some Surgical Complications and Sequelæ of Typhoid Fever. William J. Means.

Toledo Medical and Surgical Reporter.

June.

93 Diagnosis of Kidney and Bladder Disease, Especially with the Cystoscope Charles M Harpster.
94 The Benefits of the X-Ray and Static Currents John Gardner.

St. Paul Medical Journal.

June.

95 Medical Progress of the Past and the Demands of the Future on Our Profession J L. Rothrock
96 Gallstone Disease: Its Causation and Diagnosis William D. Ground
97 Medical Associations Franklin Staples
98 Gastrostomy; Stab Wound of the Thorax. Frederic T Dennis.
99 The Significance of Pain, Especially within the Abdominal Cavity C. P Thomas
100 Brain Tumor Giving Rise to Internal Hydrocephalus, but with the Clinical Aspects of a Simple Melancholia Arthur W Dunning and H C. Arey.
101 A Simple Method of Tying a Ligature Which Is to Be Removed Later Arnold Schwyzer

Journal of Medicine and Science, Portland, Me.

May.

102 New Views on the Constitution of Matter F. C. Robinson
103 Brief Sketch of the Lives and Works of a Few Eminent Scientists of Modern Times Franklin Staples.

Clinical Review, Chicago.

June

104 Typhoid Fever in Infancy and Childhood A. C. Cotton.
105 Lectures on Gynecology. Franklin H. Martin
106 Melancholia, Paretic Dementia, Two Cases of Organic Dementia Daniel R Brower
107 Clinical Lectures on the Etiology, Pathology, Diagnosis and Treatment of Tumors A H Levings.

Indiana Medical Journal, Indianapolis.

June

108 Oration on State Medicine, American Medical Association. William H Welch
109 Report of an Ectopic Gestation in the Fifth Month, with Unusual Features, Operation and Recovery. O. G. Pfaff.
110 Local Iodoform Dermatitis, with Report of a Case. Alois B. Graham
111 Impressions of Lorenz; a Day with the Austrian Surgeon on the Tchefuncta River Joseph Rilus Eastman
112 Voluntary Production of Cutis Anserina and Erection of the Hairs of the Body O W McQuown

Canadian Practitioner and Review, Toronto.

May.

113 Food in Health and Disease Adam H Wright.
114 The Indian and the Indian Medicine Man J F. W. Ross

Mississippi Medical Record, Vicksburg.

June

115 Chronic Rheumatism and Neuritis James J. Walsh

Pacific Medical Journal, San Francisco.

May

116 The Use of Acids in Gastric Disease. Alfred W Perry
117 Gastrectomy Winslow Anderson

FOREIGN.

Titles marked with an asterisk (*) are abstracted below Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest

British Medical Journal, London.

May 23

1 *The Influence of Wind on Phthisis W Gordon
2 Case of Pyopericarditis, Pyopneumo pericardium, Pneumococcus Pyemia W K Sibley, W Arbuthnot Lane and George Rowell
3 Case of Infective Endocarditis Successfully Treated by Rectal Injections of Antistreptococcus Serum Dyce Duckworth.
4 *Traumatism as a Factor in the Etiology of Pulmonary Tuberculosis James Weir
5 *The So-called Anthracosis and Phthisis in Coal Miners R S Trotter
6 *The "Physiologic" Difference Between the Two Sides of the Chest J Edward Squire
7 Consumption in the Navy W E Home
8 Observations on Empyemata in Children P Stanley Blaker.
9 Six Cases of Empyema Oswald F Rowley.

1. The Influence of Wind on Phthisis.—Among the various climatologic elements that effect the progress of phthisis, wind seems to be considered as uncertain. Gordon reviews the opinions of various authors and analyzes the statistics of certain Devonshire parishes which are more or less exposed to the wind, especially the southwest winds and ocean winds. He finds from a careful study of the subject that the direction of the wind exerts a very positive influence on consumption mortality and that these regions exposed to strong, damp winds have the highest ratio of mortality of consumption. He sums up his conclusions in the following:

1. West and southwest winds in Devonshire have a marked influence on phthisis, raising the phthisis death rate among populations exposed to them, and injuring those who have already developed the disease. 2. This bad influence is probably due to the fact that west and southwest winds are the prevalent strong wet winds of the country. 3. It is reasonable to believe that strong, wet winds anywhere may produce similar effects. 4. The bad effects may be possibly explained by the chilling and depressing nature of the winds, and by their tendency to excite bronchial catarrh in those exposed to them.

4. **Traumatism and Tuberculosis.**—Weir reports a case of tuberculosis occurring in a man in the prime of life and in ordinary health, following an injury to the chest. The family history was tuberculous, but the patient had always been well excepting for pneumonia twenty years before. One sister died of phthisis, said to be due to injury to the chest. In his own case there was a clear sequence of injury with apparently succeeding pleurisy followed by pulmonary symptoms, the presence of tubercle bacilli, etc. The patient recovered under pulmonary gymnastic treatment together with the usual medical aids. Weir remarks on the importance of traumatism, suggesting that in our ordinary estimation of the significance of pleurisy we may have the cart before the horse, and pleurisy may not be due to consumption, but consumption to pleurisy, causing adhesions and making a point of lessened resistance for the attack of the tubercle bacillus.

5. **Anthracosis.**—Phthisis was formerly considered to be a regular occupation disease of coal miners, but owing to sanitary improvements in late years this is less the case. While all miners will show a blackening of the lungs, this is by no means an indication of disease. The really formidable dust particles are not those from coal or soot, but the particles from the sandstone strata or dust from other rocks, etc., associated with the coal. The average life of the horse or pony in the pit is fully up to the average standard, and he believes that there may be some protective influence in the coal dust or coal carbon particles inhaled by the miners. He says that in fact the average coal miner often works in a mine under more healthy conditions than those under which he lives at home. He mentions the following facts as worthy of note:

1. Coal dust may remain imbedded under the skin for years without producing any irritation whatever. 2. The death returns from phthisis in a colliery district show a greater proportion of deaths among females than among males. 3. Colliery surgeons almost invariably state that phthisis is not so common in mining as in other districts where they have been in practice. 4. In the majority of phthisis cases which do occur there is a strong family history of phthisis on one or both sides. 5. Phthisis often seems to attack successive families in particular houses.

6. **Physiologic Differences Between the Two Sides of the Chest.**—Squire has investigated 58 persons, 28 males and 30 females, as to the physical signs on the two sides of the chest, all young adults and in general good health. Only in a very few were there signs of disease, and of which the subjects themselves were hardly aware. The general results are summarized by him in the following conclusions:

1. In the majority of healthy persons, but not in all, the physical signs elicited over the upper part of the right lung differ somewhat from those on the corresponding part of the left side.

2. These differences consist in the following: (*a*) The percussion note is slightly less resonant and higher pitched on the right side; (*b*) the breath sounds are louder on the right side, and the expiratory portion of the sound more marked; the character of the sound and the proportion between the length of the inspiratory and expiratory sounds is not modified in health; (*c*) the vocal resonance, especially in men, is more marked on the right side; (*d*) vocal fremitus is more marked on the right side.

3. Of these differences the increase in the vocal fremitus is by far the most constant. Differences in the percussion note are only noted in half the cases examined.

4. The differences, except in percussion, are not so much alterations in the character of the signs as modifications in transmission of the sounds.

5. The modification in the signs are apparently due to the direction and form of the main bronchus, which are not the same in the two lungs. The percussion note modification may possibly be influenced by the thicker covering of the right side of the chest, but is most probably also dependent on the position and size of the bronchus.

The Lancet, London.

May 23.

10 *Some Reflections, Mainly Ethical, on the Present Position of Operations in the Practice of Surgery. William H. Bennett.
11 *The Tongue in Disease. W. Howship Dickinson.
12 *The Disposal of the Wounded in Naval Warfare. Philip N. Randall.
13 *The Surgical Treatment of Pulmonary Hydatids. John O'Conor.
14 A Case of General Infection by a Nematode, Accompanied by Hypertrophic Gingivitis. J. Dencer Whittles.
15 Full-time Extra-uterine Pregnancy; Fetus Lodged in a Capsule of the Ovary in a Peritoneal Sac Resembling that of the Tunica Vaginalis. James Oliver.
16 *Note on the Etiology of the Sleeping Sickness. Annibal Bettencourt, Ayres Kopke, José Gomes de Rezende, Jr., and Annibal Correia Mendes.
17 On a Case of Arterial Occlusion and Gangrene. Andrew Dunlop.
18 *A Further Note on the Therapeutics of a 10 Per Cent. Solution of Sodium Cinnamate in Glycerin Injected Subcutaneously. Lovell Drage.
19 Researches on Hibbertia Volubilis. John Reid.

10. **Operative Surgery.**—Bennett reviews the record of surgery, which he thinks passes through certain stages with the surgeon: 1. The period of extra-confidence in operative work; 2, a feeling of less aggressiveness; 3, a tendency to confine one's work to certain operations with which the surgeon is most familiar and his practice becomes more eclectic; 4, in fortunate cases the period when operations may be things of the past. He deprecates too much following of operative ideals. In many cases the necessity of complete operation may be wanting. Rules of routine procedure are objected to. The mere safety of the operation sometimes tends to obscure the fact that its results are not altogether advantageous. While the use of exploratory operation has been on the whole advantageous, he thinks there are still some possibilities of its being overdone. He remarks on the position of the surgeon toward the public; the difficulty sometimes of the patients or their friends persisting in demands for operation, and considers the responsibility of surgeons in these cases. He believes in the future that the operative surgeon as we now know him will be a less imposing figure in the medical landscape than he is now, and operations, except in a restricted degree, which he advocates, will be looked on with as little favor as suppuration is regarded at the present time.

11. **The Tongue in Disease.**—Dickinson reviews the various conditions of the tongue in disease, especially those that may be symptomatic. The first stage of disease is what he calls the dotted or stippled tongue, characterized by a trifling excess of epithelium on the papillæ. It may not necessarily mean ill health, it may be an individual peculiarity. It is not usually accompanied with pyrexia. The coated or loaded tongue comes next. This is an exaggeration of the former state, a superabundance of epithelium, by putting too much on or taking too little off. Some degree of febrile action is usually present. The average temperature in his study of 49 cases was 99.1. The method of taking food is often concerned in the production of this type of tongue, but it occurs in a great variety of cases where the patient is out of sorts, though not really ill. Whatever raises the temperature, impairs the appetite and restricts the salivary flow gives rise to this state of affairs. When the coated tongue is dry the indication is more grave. Two varieties are mentioned: the strawberry tongue and the plastered tongue, which is simply the ordinary coated tongue, only more so. A first glance of this gives the alarm of either pneumonia or typhoid fever in the first place, then of acute bronchitis or acute rheumatism. Other acute disorders may be indicated, though less prominently. The average temperature in the 29 cases presenting this tongue was found to be 101.6. This is the most definite in its indications of all the tongues of which we know. Next he mentions the furred or shaggy tongue, which is more characteristic of chronic than of acute cases. Except with the diet this tongue has no special association, though some degree of pyrexia is usually present. He has noticed it in pneumonia, typhoid and acute rheumatism, which generally means a long illness of such a sort as to restrain saliva and inhibit solid food. Succeeding the plastered and furred tongue comes the incrusted, brown and dry tongue with the elongated papillæ separated and caked over with a brittle crust, cracked and fissured, which largely consists of vegetable organisms. It indicates a long exemption from wear and wash, or the absence of mastication, production of saliva, and generally, though not neces-

sarily, of high temperature. This is the tongue of the typhoid state, though not limited to typhoid fever. It is of grave prognosis and calls for liquid nourishment and stimulants. Next he speaks of the denuded tongue, red, smooth and dry, which is usually associated with pyrexia and deficiency of saliva. It represents a later phase of disease than the coated or encrusted, for it often succeeds them. Exhaustion by discharge evidently plays a large part in the impairment of nutrition which this tongue represents. Pyrexia is not so high. The diseases with which it is associated are mostly subacute and the fevers are often hectic. Its clinical significance is prostration of some standing, often connected with material exhaustion and apt to be attended with febrile action of the hectic type. Physiologically the essential factor is failure in the growth of the lingual epithelium due to a concurrence of causes.

12. **Disposal of the Wounded in Naval Warfare.**—See "London Letter" in news department, this issue.

13. **Pulmonary Hydatids.**—O'Conor thinks that Argentina is probably only second to Australia in its frequency of hydatid disease. He has operated on 84 cases in the last 8 years, 3 of which were pulmonary, and discusses the diagnosis, localization, treatment, etc., of these cases. The diagnosis may be difficult before rupture of the cyst occurs. He does not like exploratory operations on the chest, and recommends the exploratory needle and syringe as a diagnostic agent to locate the cyst and to find its nearest point to the surface. He does this under anesthesia. His operation is described. He makes a four inch cut parallel to the corresponding ribs which are incised, the pleura opening and the presenting lung secured by bullet forceps and drawn into the wound, the exploring needle again inserted and left *in situ* to act as a guide for the knife. The intervening tissue is excised and the cut edges seized and diverted. As the fluid escapes the needle is withdrawn and the index finger introduced along the blade of the knife into the cyst. The latter is then withdrawn and two sharp hooks inserted alongside the finger and the cyst walls secured and drawn outwards. With a large, full curved needle half a dozen silkworm gut sutures are applied so as to include the cut edges of the fibrocyst with some pulmonary tissue and passed outward through the intercostal muscles and the skin, and just as they are being tied the assistant removes the bullet forceps so that the extruding portion of the lung may recede. The endocyst is removed by gentle application of a long forceps, a large rubber drain inserted and iodoform gauze applied to the wound. The after-treatment is tedious. There is a tendency to the formation of a flask shaped cavity by closure of the external wound before the cavity of the lung is obliterated. He does not believe in removal of the contents and closure of the external wound without drainage. Four cases are reported.

16. **Sleeping Sickness.**—The members of the Portuguese commission argue for their priority in the discovery of the bacterium of this disease and the identity of that described by Castellani with their own.

18. **Sodium Cinnamate.**—Drage has used sodium cinnamate in tuberculosis with success and reports a case. His experience has led him to believe that in early cases of pulmonary tuberculosis a successful issue may be predicted with confidence, and that in all more advanced cases amelioration may be guaranteed with equal confidence by this treatment. He employs a 10 per cent. solution of cinnamate of soda in glycerin, subcutaneously, 30 minims at a time. The glycerin is injected into the flank as a rule. He has also employed it in cancer with good results.

Journal of Tropical Medicine, London.

May 15

20 Notes on the Insanitary Condition of the Standerton, Transvaal. Myer Coplans.
21 Case of Peripheral Neuritis, Probably Rice-Produced, Simulating Beri-beri, from Omdurman, Soudan. J. B. Christopherson.
22 Tropical Hygiene. W. J. Simpson. (To be continued.)

Intercolonial Medical Journal of Australasia, Melbourne.

April 20

23 Observations on Pathology and Surgery of Retro-displacements of the Uterus. G. Rothwell Adam.

Archiv f. Gynaekologie, Berlin.

Last indexed page 27

24 (LXVIII, 1.) Beitrag zur geburtshülflichen, gynäkologischen und entwicklungsgeschichtlichen Bedeutung des Anus anomalous vulvovaginalis. H. von Bardeleben (Berlin).
25 *Tubal Nidation. Kroemer (Giessen).—Untersuchungen über die tubare Eieinbettung.
26 Mutual Relations Between Parametritic Exudate and Pregnancy, etc. L. Blumreich (Berlin).—Ueber die Wechselbeziehungen zwischen parametritischem Exsudat und Schwangerschaft, Geburt und Wochenbett.
27 *Etiology of Birth Paralysis. J. Eversmann (Bonn).—Beitrag zur Frage der Aetiologie der Entbindungslähmungen der oberen Extremität.
28 *Vaginal Laceration During Labor. M. Kaufmann (Lodz).—Zur Lehre von den Zerreissungen des Scheidengewölbes während der Geburt.
29 Zur Eklampsie-Frage. L. Knapp (Prague).
30 (No. 2.) Ueber einen durch ungewöhnlichen Sitz ausgezeichneten Ovarialtumor. A. Bluhm (Berlin).
31 Ein Beitrag zur Kenntniss des Sarcoma botryoides mucosæ cervicis infantum. Ibid.
32 *Ueber die Breus'sche Hämatommole. F. Taussig (St. Louis).
33 Case of Hemignathia. O. Bürger (Vienna).—Ueber einen Fall seltener Missbildungen.
34 *Resistance to Infection and Intoxication During Pregnancy. Bossi (Genoa).—Ueber die Widerstandskraft von Thieren während der Schwangerschaft und im Puerperium gegen Infection und Intoxication.
35 *Recovery After Multiple Perforations from Sponge Left in Abdomen, Technic, etc. Kayser (Berlin).—Ein durch dreifache Darmresection geheilter Fall mehrfacher Darmperforation im Anschluss an das Zurücklassen einer Compresse in der Bauchhöhle nebst Bemerkungen zur Technik der Darmresection.
36 *Die Nuclein-Kochsalzbehandlung der puerperalen Sepsis im Lichte moderner Forschung. J. Hofbauer (Vienna).
37 *Instrumental Dilation. A. Dührssen (Berlin).—Ist die Bossi'sche Methode wirklich als ein Fortschritt in der operativen Geburtshülfe zu bezeichnen?
38 *Ein weiterer Fall von Tuberculose der Placenta. E. Runge (Berlin).
39 Study of Disinfection of Hands, Rubber Gloves in Obstetrical Training. H. Schumacher (Strassburg).—Bacteriologisch-klinische Studien zur Frage der Händedisinfection und der Bedeutung der Gummihandschuhe für den geburtshülflichen Unterricht.
40 *Die Function der Corpus luteum. L. Fraenkel.
41 (No. 3.) *Intrauterine Rigor Mortis. B. Wolff (Berlin).—Ueber intrauterine Leichenstarre.
42 Ueber einen in pathologisch-anatomischer und klinischer Hinsicht bemerkenswerthen Fall eines Dickdarmcarcinoms mit Ovarialmetastasen und ausgedehnter carcinomatöser Erkrankung der Haut (Cancer en cuirasse). Kayser (Berlin).
43 *Influence of Pregnancy, etc., on Muscular Powers. Bossi (Genoa).—Einfluss der Menstruation, der Schwangerschaft, der Geburt und des Puerperalstadiums auf die Muskelkraft.
44 *Zur Bildung der Capsularis bei der Tubarschwangerschaft. Voigt (Dresden).
45 Zwei Fälle Thoracopagus tetrabrachius. K. Kamann (Munich).
46 *Ueber zwei Fälle von Sectio cæsarea wegen Eklampsie. E. Streckeisen (Münsterlingen).
47 Zur Kasuistik und Statistik der Lithopädions. Extrauteringravidität. Ausgetragene Frucht, 4 Jahre retinirt. Lithokelyphos per koeliotomiam entfernt. M. Strauss (Kronach).
48 *Tuberculosis of Ovarian Tumor. F. Prüsmann (Kiel).—Zur Tuberculose der Eierstocksgeschwülste.
49 Die Aetiologie der congenitalen Zwerchfellhernien (hernia of diaphragm). W. Liepmann (Halle).
50 Zu der Mittheilung von A. Duhrssen "Ist die Bossi'sche Methode wirklich als ein Fortschritt in der operativen Geburtshulfe zu bezeichnen?" Bossi. (Reply to No. 37 above.)

25. **Tubal Nidation.**—Kroemer states that the egg is embedded in the tube in exactly the same manner as in the uterus. It sinks through the softened mucous membrane of the tube into the fibro-muscular membranes and is completely encapsulated. Ordinarily the mucous membrane at this point rises and forms the capsule. Then the egg grows either into the lining of the tube or it separates the lining and the mucous membrane and presses the tube to the opposite side, and so lies within the muscular layer. In this case the tube is found as a small slit at the periphery of the egg. Sometimes the growth of the tube will cause a disturbance of the placenta and a hemorrhage follows which dissects the mucous membrane free from the muscular layer, and it is found as a string running through the extravasated blood. He believes that muscular contraction of the tube causes hemorrhage leading to abortion and in such cases fragments of villi may be left behind and form new growths. This fact is a point in favor of operative interference in every case of tubal pregnancy.

27. **Etiology of Birth Paralyses of the Upper Extremity.**—Eversmann cites a case of version, after which the child had paralysis of the muscles supplied by branches of the fifth and sixth cervical nerves. Suspecting a fracture, but unable to

demonstrate it, a radiograph was taken which showed a green stick fracture of the opposite or right clavicle, but no left-sided bony lesion. The child died suddenly at 2½ months without much change of condition, and the postmortem showed the healed fracture of right clavicle and a rupture of branches of the fifth and sixth left cervical nerves.

28. **Tears of the Vaginal Vault During Labor.**—Kaufmann reports 80 cases from the literature, including his own, and gives careful analysis of these. The tear is most frequently located posteriorly; its extension on the uterus complicates prognosis and treatment. The laceration is usually spontaneous, and most patients were multiparæ; in a few cases the children were oversized. In 68 cases the peritoneum was torn open; in 7 cases no report; in 5 cases uninjured. As to treatment during delivery, 20 abdominal and 2 vaginal hysterectomies were performed, and 6 laparotomies for repair of tear to peritoneum, while 9 were repaired per vaginam; 19 cases drained and tamponed; 7 were aseptic. Death occurred in 28 cases, 10 from hemorrhage and 18 from sepsis. In 40 cases of uncomplicated rupture of vaginal vault, there were 10 deaths, 2 from hemorrhage. The author shows by cited cases how almost any obstetrical operation may tear or perforate the vaginal vault or cervix. Etiologic factors are traumatism from different operations, histologic changes in the musculature and faulty mechanism or spontaneous rupture. About 40 per cent. of such tears occur in cases of transverse position of fetus. When rupture has taken place often no severe symptoms appear and the condition is found accidentally when examination is made or manual delivery of placenta attempted. Diagnosis depends on gradual cessation of pains, moderate hemorrhage and possible prolapse of intestine, confirmed by digital examination. In this condition such severe pains and collapse as in rupture of the uterus are not found. The prognosis is better than in the latter. The mortality is only 25 per cent., as contrasted with 65 per cent. in rupture of uterus. The prognosis as to the child is unfavorable. The author recommends delivery through the opening in the vaginal vault, since it does not decrease in size as does the wound in a ruptured uterus. Laparotomy is indicated only when hemorrhage is not easily controlled from below. Hysterectomy is indicated only when the uterine tear is extensive and its margins ragged and contused. The vaginal tear should be closed with suture and the drain and tampon used as needed.

32. **The Blood Mole of Breus.**—Taussig reports from Wertheim's clinic in Vienna 8 new cases of blood mole, first described by Breus in 1892. He discusses their pathology and clinical symptoms and reaches the following conclusions: 1. These moles can be divided into two classes, namely: (a), those with a pedicle where the placenta was not distinguishable, and (b) those with a broad base where the placenta was already differentiated. 2. Absence of vessels in the chorion and of the heart is not characteristic of this kind of a mole, for chorion vessels and rudiments of a heart are sometimes found. 3. The decidua is sometimes preserved; hence the cause of the malformation can not be changes in the decidua. 4. The syncytium grows after the death of the fetus, but not the Langhans' layer. 5. Amnion epithelium can also grow after death of the fruit. 6. A post-mortal growth of chorionic villi was not proven. 7. The embryo shows certain malformations, but none that can be regarded as the cause of its death. It is generally shriveled. 8. The formation of the blood mole occurs in the following way: After the death of the fetus the membranes grow and the liquor amnii increases in amount so that a secondary hydramnion occurs. Later, from unknown causes, this post-mortal growth ceases. The egg is retained and the amniotic fluid is gradually reabsorbed. The membranes become folded together, partially filled with blood, and finally a sessile or a pedicled hematoma is formed.

34. **Immunity of Animals During Pregnancy and the Puerperium in Respect to Infection and Intoxication.**—All agree that various factors like cold, loss of blood, etc., increase the susceptibility to infection. In order to determine whether pregnancy is also such a factor Bossi has experimented on 79 rabbits and guinea-pigs, some pregnant and some non-pregnant, injecting under the skin or into the veins cultures of the bacil coli, diphtheriæ, tuberculosis, etc., as well as streptococci an staphylococci. His conclusions from these observations, whic he regards as only preliminary, are as follows:

1. After infection with mixed cultures of streptococci and staph lococci or streptococci and diphtheria bacilli the number of acu infections was much greater with pregnant than with non-pregnar animals. Also the number of deaths was much greater with preg nant animals when equal amounts of the pathologic germs wer injected under similar conditions. 2. The further advanced th pregnancy, the greater were the effects of the injection. 3. Th temperature was higher after experimental infection in pregnan animals than in the control animals. 4. Abortion was commo after experimental infection. Opposite results were obtained afte experimental infection with *Bacilli diphtheriæ*; the pregnant an mals possessed the greater immunity. 5. Frequently pathogen bacteria were found in the placenta and less often in the feta blood. 6. Diphtheria toxin had less effect on pregnant animals 7. Puerperal animals showed no great susceptibility to experimenta infection. 8. Injected micro-organisms were found in the mil secretion.

The important clinical conclusion is drawn that artificia interruption of pregnancy is indicated in cases of infectiou disease like tuberculosis.

35. **Intestinal Resection for Multiple Perforation.**—Kayse reports a case of multiple perforation following the leaving of a sponge in the abdominal cavity, and cites many others, including experiments on animals. The symptoms usually are: Severe abdominal pains, peritonitis, sometimes chills, vomiting and constipation. He concludes that unless the sponge is soon removed it will initiate a fatal sepsis. As for the technic, he advocates the wedge-shaped excision with the preservation of mesentery intact, because of its ease of performance; because it is suitable for work in large intestines where the Murphy button is less practical; because in multiple resection it allows the passage without difficulty of a Murphy button if that has been used in the higher anastomosis, and because it combines rapidity with a high degree of safety. The angle caused by this anastomosis is functionally unimportant.

36. **The Sodium Chlorid-Nuclein Treatment of Puerperal Sepsis.**—Nineteen severe cases of general puerperal sepsis in Schauta's clinic have been treated with nuclein and salt solution, with one death. Nuclein in doses of 5 to 6 grams every 12 to 24 hours is given until the bone marrow reaction appears (bone sensitiveness). Five to six hundred grams of salt solution are given daily either subcutaneously or by the rectum. The recent investigations of the part played by the bone marrow in the regeneration of the blood and in the formation of immune bodies are discussed and a theory for the mode of action of the nuclein and the salt is given.

37. **Can the Bossi Method Be Regarded as an Advance in Operative Obstetrics?**—Dührssen has found in gynecologic practice that the cervix dilates to a certain point with solid dilatation and then tears easily; the same is true in obstetric work. He believes that Bossi's method, in many cases, can dilate only by producing tears, as in old primiparæ, in multiparæ having hard cervical scars, and in the premature labor of primiparæ. He cites a number of reported cases and draws the conclusions from them that in placenta previa the Bossi method is useless since it only increases bleeding, whereas the chief indication is not hastened delivery, but efficient hemostasis, which the metreurynter accomplishes well. If the cervix is obliterated in cases where the Bossi method either failed or dilated with severe tears and version or perforation had to be done, the author believes his method of incision into the cervix would have been best and harmless. He thinks the metreurynter fully as good as the Bossi instrument since it dilates, without tearing, sufficient for delivery in half an hour to one hour. In case it does not dilate, he believes the method of careful incision to be better. In cases of miscarriage where rapid emptying of the uterus is desirable and the cervix rigid, the vaginal cesarean section is preferable because of its ease and rapidity of accomplishment. If this be considered inadvisable, use the bag until some dilatation is made and then make the version according to his method. Dührssen does not believe that infection is carried in by the bag, as claimed by some, nor has he ever had trouble in introducing it. Crowding the advancing part and increasing tendency to prolapse of the cord are also urged against it, but he has never witnessed them. In either

event it is only preparatory to version and matters not. Altogether, the Bossi method is neither sure nor safe since it cannot in every case dilate sufficiently to allow delivery of a living child, and because it causes uncontrollable tears and contusions favoring infection. The author believes the best method for rapid delivery in case of obliterated cervix is by deep incisions; in case of non obliterated cervix, the use of the metreurynter and Mueller's bag with constant traction until the cervix is nearly obliterated. In case of non obliterated and rigid cervix he prefers his vaginal cesarean section.

38. **Tuberculosis of the Placenta.**—Runge reports from the literature several cases in which fetuses were tubercular, being infected through the blood and placenta. He describes the histological changes in the placenta, showing how the bacilli pass from the mother's tissue into the placenta. In the case he himself reports, the tubercular infection occurred in the decidua basalis, while in all the other cases it was found only in the layer of chorionic villi. Here no groups of bacteria were found in either the capsularis or vera, but in the broad decidua they were found around the Nitabuch layer, in the glandular layer of decidua and in a tongue of decidua projecting between the chorionic villi.

40. **Function of the Corpus Luteum.**—Gustav Born of Breslau first suggested the hypothesis that the corpus luteum of pregnancy is a gland with intrauterine secretion having the function of causing the nidation and development of the egg. Fraenkel believes that he has established this theory by experiments, and he has extended it. He holds that there is no essential difference between the true and false corpora lutea, which are ovarial glands controlling the nutrition of the uterus from puberty to the climacterium, and causing the insertion and development of the fertilized egg and of menstruation when the egg remains unfertilized. The facts favoring this theory are the gland like structure of the corpus luteum, and its growth after ovulation and the fact that only animals which have a uterine insertion of the egg possess developed corpora lutea. Experiments were made chiefly on rabbits and required considerable preliminary observation to determine the sexual physiology of these animals. By various series of experiments, in which he removed sometimes one or both ovaries, and sometimes one or all of the corpora lutea, Fraenkel determined that they are necessary to the insertion of the egg or to their development up to about 20 days. This trophic influence is exercised on the uterus by the internal secretion of the corpora lutea carried by the vessels. The influence of the so called false corpus luteum was determined on animals by burning them out, when temporary atrophy of the uterus occurred. In women in a number of cases of laparotomy for ventrofixation and similar operations, the corpora lutea were removed, with the result that menstruation remained absent for one or two periods. Therapeutic use of these facts appears in the employment of "lutein" prepared from the lutein bodies, which prevents the appearance of the premature menopause symptoms. Also in operations on the ovary during pregnancy we should preserve the ovaries and their lutein bodies as long as possible.

41. **Intrauterine Rigor Mortis.**—To the 30 cases previously reported Wolff adds 4 more from the obstetrical polyclinic of the Berlin Charity Hospital. He concludes that the occurrence of this physiological phenomenon is not extremely rare, but generally overlooked. The rigor generally reaches its climax about three to four hours postmortem. If the child remains in the uterus over five hours after its death the rigor will probably nearly or quite disappear. Particularly early and severe rigor mortis occurs where the mother is in a dying condition before or during the birth of the child. He explains this fact by assuming an extreme disturbance of the circulation in the parous woman causing a retention of metabolic products in the fetus, which, after its death, influences the early and intense development of rigor mortis. This circulation disturbance in the mother is very frequently due to eclampsia, but may result from other causes.

43. **Influence of Menstruation, Pregnancy, Labor and of the Puerperium on the Muscular Power.**—Bossi used Mosso's ergograph to determine the variations in muscular power caused by menstruation, pregnancy, etc. To determine the effect of menstruation he made daily observations for several months on a number of midwife students. Some of these ergographic curves are reproduced in the paper. They show that menstruation has a morbid influence on voluntary muscular contraction. It is particularly noticeable that the muscular strength is diminished in the period preceding the bleeding. This fact is explained by the hypothesis that toxic substances are eliminated by menstruation. Just before menstruation these toxic substances have accumulated and exercise a deleterious effect on vital functions including muscular efforts. The observations on pregnancy, labor and the puerperium were made on a number of patients. They showed that muscular strength is lessened just preceding the physiological crises of pregnancy. These crises correspond to the times when menstruation would have occurred in the non pregnant state. The effect of labor is also shown in the curves.

44. **Formation of the Enclosing Capsule in Tubal Pregnancy.** The covering of the egg in tubal pregnancy is held by some to be a decidua reflexa and by others folds of tubal mucous membrane. The study of six suitable specimens has led Voigt to the conclusion that the capsule is formed by the penetration of the egg into the maternal tissues and embedding of itself deep in the tubal walls. Thus the mucous membrane, the connecting tissues and also a part of the muscles surround and cover the ovum. In the course of further development this capsule may be so changed by the devouring action of the Langhan's cells or by hemorrhage that only band-like remnants of the walls remain. He found no trace of decidua reflexa.

46. **Cesarean Section for Eclampsia.**—Streckeisen reports two cases of cesarean section for eclampsia, both twin pregnancies. In one, both children were extracted dead and the mother died of infection. In the other both mother and children were saved. In 1897 Kettlitz collected 28 reported cases of cesarean section for eclampsia and found a mortality of 50 per cent. for the mother and 62 per cent for the children. Streckeisen has collected 28 additional cases, including his own, which show a mortality of 32 per cent. for both mothers and children. The mortality of mothers for all 56 cases is 42 and of the children 46.5 per cent. As a result of his studies he concludes that the operation has a place in the treatment of eclampsia in extreme cases.

48. **Tuberculosis of Ovarian Tumors.**—Prusman reports a case of this rare combination which is the thirteenth case now on record. Like most of the others the tumor was a cyst. Tubercle bacilli were found. He contends that the cyst in his case was secondarily infected and not that the introduction of the bacilli stimulated the growth of the cyst. On account of the absence of any signs of general or local infection, he admits the possibility of a primary infection in this case, possibly from sexual connection.

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51 (VI, 3.) Solid Tumors in Abdominal Cavity of Unknown Origin. F. Prusmann (Kiel).—Zwei Fälle von soliden Tumoren der Bauchhöhle unbekannten Ursprunges.
52 *Ovarian Pregnancy. H. Futh (Leipsic).—Über Ovarial schwangerschaft.
53 *Zur Bakteriologie des Lochialsekretes fieberfreier Wöchnerinnen. K. Franz (Halle).
54 *Zur Indikationsstellung für die Total Exstipation des septischen Uterus. Baisch (Tubingen).
55 *Posterior Parietal Presentation. W. Zangemeister (Leipsic).—Ueber Hinterscheitelbeineinstellung.
56 Beitrag zum Studium der path. Anatomie der Atresia hymenalis congenita. O. Beuttner (Geneva).
57 Ein eigentümlicher Fall von inversio uteri senilis mit Bemerkungen über die operative Behandlung der Inversion überhaupt. R. von Fellenberg (Berne).
58 Mucous Polypi. O. Beuttner (Geneva).—Ueber Schleimhaut polypen der Uterushöhle.
59 *Diagnose und Behandlung der Genitaltuberkulose beim Weibe. H. Sellheim (Freiburg i. B.).
60 *Cancer Inoculation. H. Hellendall (Tubingen).—Ueber Impfkarzinose am Genitaltraktus.
61 Fall von "Missed labour" bei Carcinoma uteri. A. Labhardt (Basle).
62 Weitere Beiträge zur Lehre der mesonephrischen Tumoren. G. Schickele (Strassburg).
63 (VII, 1.) *Ueber die Behandlung der Uterusruptur. P. Zweifel (Leipsic).
64 *Ueber die Entfernung entzündeter und durch Neubildung erkrankter Ovarien mittels vaginaler Koliotomie. F. Heinsius (Greifswald).

65 *Accidental Injuries During Gynecologic Operations. A. Blau (Vienna).—Ueber die am Klinik [illegible] ogischen Operationen beobachteten [illegible]
66 *Beiträge zur Anatomie der ausgetrag[illegible] [illegible]ität. R. Freund (Halle).
67 Small, Recent Carcinoma of Cervix with Extensive Glandular Metastases. F. Tiburtius (Freiburg).—Collumkarzinom von kurzer Dauer und geringer Ausbreitung bei hochgradiger Lymphdrüsenmetastase.
68 Histologic Changes in Placenta Occasioned by Death of Fetus. H. Szasz (Budapest).—Ueber durch den Tod des Foetus bedingte histologische Veränderungen der Placenta.

52. **Ovarian Pregnancy.**—Füth describes a case which has all the marks of ovarian pregnancy demanded by Leopold, namely, absence of ovary on the side corresponding to the tumor and its participation in the formation of the fruit sac; union of the latter with the uterus through the utero-ovarian ligament, and complete freedom of the tube including the plica infundibulo-ovarialis. A lithopedion was found on the opposite side of the abdomen. Füth considers this the twenty-first case of proven ovarian pregnancy.

53. **Bacteria in the Lochia of Normal Puerpera.**—In order to determine whether the uterine cavity is sterile or not during the first nine days of the normal puerperium, Franz undertook the examination of 120 normal puerpera, namely those whose axillary temperature never exceeded 38 C. and who had no other pathologic symptoms. The secretion was taken according to the rules of Doederlein, and all was used in the cultures. Of 20 cases examined in the first two days of the puerperium, 8, that is 40 per cent., gave positive results. Of 100 cases examined in the third to ninth days, 63 were positive. Staphylococci were found twelve and streptococci nine times. Bacteria were found more often when the temperature was under 37.5 C. than when it was between 37.5 and 38 degrees. Cases with purulent secretions were more frequently contaminated than those with bloody or serous lochia. The greater the amount of the lochia the more likelihood of a positive finding. The findings were more frequently positive in multiparæ than primiparæ. There was less liability to contamination when the labor was protracted. The conclusions from this investigation are that there is no relation between contamination of the uterine cavity and the clinical symptoms, or in other words, the presence of bacteria in puerpera without fever is not pathologic.

54. **Indications for the Total Extirpation of the Septic Uterus.**—Baisch first considers the danger on account of sepsis of the complications of labor with complete inversion of the vagina with elongation of the neck of the uterus. In only 31 cases of 124 reported in the literature was labor spontaneous. The mortality of the children was 30 per cent., and of the mothers about 11 per cent. In two cases of Doederlein's clinic in Tübingen hysterectomy probably saved the patient's lives, while in one where operation was refused, the patient died. Baisch concludes that in cases of total prolapse when fever exists during labor, hysterectomy is indicated. A discussion of other indications leads to the conclusion that cases of mixed infection and saprophytic disease call most often for surgical interference because intoxication from the latter makes it very difficult for the organism to successfully combat the infection.

55. **Posterior Parietal Presentation.**—Zangemeister divides the cases into primary and secondary, depending on whether the membranes are intact or not. Primary cases are rather common and generally terminate spontaneously. In 2,250 labors 10 cases of secondary posterior parietal presentation occurred (equal to .44 per cent.), 2 of which terminated spontaneously. He concludes that turning is best when the presentation does not improve in a short time. If turning is impossible on account of danger of rupture, spontaneous delivery may be waited for under certain conditions. Symphysiotomy is in these cases valuable. External or combined rectification is almost always impossible. High forceps is allowed only as a trial before perforation of a living child.

59. **Diagnosis and Treatment of Genital Tuberculosis in Women.**—Sellheim calls especial attention to Hegar's sign of pelvic tuberculosis found by internal examination, namely, presence of numerous nodules from the size of a pin's head to a lentil on the ligamenta sacro-uterina, the posterior surface of the uterus and of the ligamenta lata. Operative treatment should be instituted only when thorough general and local treatment fail to stop the progress of the infection. To determine the value of both methods Sellheim has studied the results in cases treated in the Freiburg clinic during the last eight years. There were 31 palliative and 27 operative cases. He found the results of the palliative treatment satisfactory as far as disappearance of pain, ability to work and shriveling of diseased organs were concerned. In the operative cases he found the best results in the radical operations where both adnexa and uterus were removed.

60. **Cancer Inoculation in the Genital Tract.**—Hellendall concludes that no case of cancer metastasis in the vagina through inoculation from a corpus or a cervix cancer has been proven to occur, and that the probability of such an inoculation can not be assumed since a careful microscopic examination has not excluded the possibility of distribution of the cancer in a retrograde manner through the veins and lymphatics.

63. **Treatment of Uterus Rupture.**—Zweifel holds it very important to distinguish between complete and incomplete rupture. For the latter, drainage is a satisfactory treatment, but not for the former. He recommends here laparotomy and careful suture of the serosa *not including the musculature* which should always be regarded as infected. After recovery the patient may be sterilized by excising a piece of each tube to prevent rupture in a subsequent pregnancy. After suturing the tear the peritoneal cavity should be carefully cleaned from blood. He reports 29 cases from his clinic.

64. **Vaginal Ovariotomy.**—Heinsius describes the technic adopted by A. Martin and discusses the indications for operation and the complications which may arise. A table is given of the 110 cases operated on at Greifswald.

65. **Accidental Injuries During Gynecologic Operations.**—The effort made in recent years to increase the thoroughness of operation for malignant disease has resulted in an increase in the injuries to neighboring organs, namely, the ureters, the bladder, and the bowels. A study of the accidents that have occurred at Chrobak's clinic in the last twelve years has been made by Blau. They are classified, compared with those of other clinics as far as possible, and their treatment considered. In 2,193 operations 45 (equal to 2 per cent.) accidents have occurred. The ureters were injured 15 times, bladder 21 times and bowels 14 times. The mortality of ureteral injuries was 80 per cent., of bladder injuries 43, and of bowel injuries 78 per cent. Of the 45 operations 24 were laparotomies with 26 injuries, including 10 of the ureters, 7 of the bowels, and 9 of the bladder. Twenty were vaginal operations, with 23 injuries, including 4 of the ureters, 12 of the bladder and 7 of the bowels, and one was a sacral hysterectomy with 1 injury to the ureters.

66. **Extrauterine Pregnancy at Term.**—Freund reports a case of unruptured tubal pregnancy at term with a fungiform placenta, and discusses the features of this rare case (only four others are known). The chief conclusion from the study is that where the placenta is inserted on the mesosalpinx it takes a fungus form whose stalk is formed by the vascular tubal wall. On account of the great development of the vascular apparatus the musculature can remain intact to the end of pregnancy. Freund also reports a case of *lithokelyphopedion* and gives a table of 10 other cases known.

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69 (XXVII, 13.) *Zur Radikaloperation der Nabelbrüche und der epigastrischen und subumbilikalen Hernien der Linea alba. Menge (Leipsic).
70 *Lateral Symphysiotomy. L. Meyer (Copenhagen).—Fall von Lateralschnitt durch das Os pubis nach Gigli.
71 *Eine neue Methode der *Prolaps-Operation.* A. Rieck (Altona).
72 (No. 14.) *Retention of Fetus After Laceration of Gravid Uterus. L. Goth (Kolozsvar).—Fruchtretention nach Zerreissung der schwangeren Gebärmutter.
73 Zur Narkosen-Frage. G. Burckhard.
74 *Ueber Impregnierung. E. Toff (Braila, Roumania).
75 (No. 15.) Origin of Cervico-Vaginal Fistula. A. Ostrcil (Prague).—Fall von Fistula cerv.-vag., bei welchem der Entstehungsmodus direkt beobachtet wurde.

76 *Ein neues Pessarium zur Behandlung grosser inoperabler Genitalprolaps. Menge (Leipsic).
77 Tetanie nach einer Perineoplastik. L. Goth (Kolozsvar).
78 (No 16) Case of Dorso-anterior Frontal Presentation. F. Ahlfeld.—Fall von dorso-anteriorer Vorderhauptslage.
79 Vaginal Cesarean Section for Uncontrollable Vomiting. E. Ehrendorfer.—Zum konservativen vaginalen Kaiserschnitt, ausgeführt wegen unstillbaren Erbrechens in der Schwangerschaft. One case. Successful.
80 *Vaginal Cesarean Section in Eclampsia. A. Dührssen (Berlin).—Ein weiterer Fall von vaginal Kaiserschnitt bei Eclampsia graviditatis.
81 Phantom for Teaching How to Protect the Perineum. W. Zangemeister (Leipsic).—Ein Dammschutzphantom.
82 (No. 17) *New Sign of Multiple Pregnancy. Jentzer.—Ein neues Zeichen von mehrfacher Schwangerschaft.
83 Apparent Abdominal Pregnancy in Rabbit After Primary Rupture of Uterus. K. Kamann (Greifswald).—Scheinbare Abd Gravidität beim Kaninchen, etc.
84 *Weiterer Beitrag zur Bekämpfung des Ileus mittels subkutaner Strychnin-Injektionen. H. Grube.
85 Zur Technik der Füllung des Kolpeurynters. A. Foges (Vienna).
86 (No 18.) *Self holding Speculum. S. Spiegel (Schauta's clinic, Vienna).—Ein neues selbsthaltendes Spekulum.
87 Complications of Ovarian Dermoids. Ahrens.—Komplikationen bei Eierstocksdermoiden.

69. **Radical Treatment of Hernias on Linea Alba.**—Menge has recently operated on two very large umbilical hernias and one subumbilical, by a modification of Bioñdi's method of combined vertical and transverse incision. He aimed to produce a very broad, flat adhesion of the fascia to the muscle at the point of the previous hernia, and the results confirmed his assumption that this technic would impart great solidity to the cicatrix. The anterior lamella of the sheath of the rectus was incised across to a distance of 3 or 4 cm. on each side of the hernial opening, the rectus itself divided lengthwise with the fingers and the posterior lamella of the sheath also incised across. Each lamella was then sutured across; the rectus with a vertical suture. The wound healed rapidly by primary intention in each case, but further experience will show whether this technic allows the development of a hematoma under the fascia, and whether the circulation in the fascia and muscles will be impaired.

70. **Lateral Symphysiotomy.**—Meyer reports a case in which he performed pubiotomy or extramedian symphysiotomy according to Gigli's technic. The child had been born dead in a previous pregnancy, terminated by obstetric maneuvers. At term, with the second pregnancy, the rachitic pelvis measured only 7 to 7.5 cm., labor was energetic and head movable above the inlet, which it was unable to enter. Instead of making an oblique incision, Meyer incised vertically, inserting his finger from below and catching with it the wire saw introduced from above. The sawing was thus parallel to the median line and proceeded with surprising ease. The child was then extracted without difficulty, the bone gaping about 5 cm. The pubis was sutured with silver wire, with a small drain tube left at the lower angle of the wound, removed the sixth day. There were no urinary disturbances except that catheterization was necessary for four days. The union seemed solid by the seventeenth day and the patient was allowed to get up the twenty-first. The gait is free and natural and she can stand on either foot alone without trouble. There has been no displacement of the bones. The child weighed 3,700 51 gm. This is the fourth pubiotomy Meyer has done and all the patients rapidly recovered. He mentions that the treatment after an operation on the symphysis or pubis is much facilitated by the Borries litter, made at Copenhagen. He suggests as the only drawback to this extramedian symphysiotomy, the possibility that the circulation of the small fragment of bone left adherent to the symphysis may be interfered with. His experience indicates that the circulation is adequate, but time alone can fully decide the question. (Gigli's communication on the subject was reviewed in The Journal, xxxix, p. 226.)

71. **New Method of Prolapse Operation.**—Rieck is able to ensure complete relief and freedom from recurrence even in cases of total prolapse of uterus and vagina. The uterus is detached from the bladder and the latter with its peritoneal covering is fastened on the posterior surface of the uterus, while the anterior wall of the vagina is sutured to its anterior surface and up over the top of the fundus. As the uterus is thus fastened in extreme anteflexion between the bladder and vaginal wall there can be no further prolapse, and the bladder is prevented from pushing down the vaginal wall as the uterus is interposed. The rear wall of the vagina is sutured to the perineum and does not show even if it may stretch a little. In case of women still in the child-bearing period a less radical procedure is preferable. In this case the anterior wall of the vagina is incised on the median line and the two halves superposed, thus doubling the wall of the vagina along this part. The detached mucosa with its raw connective tissue surface healed perfectly to the epithelium surface in the 4 cases that have been treated according to this technic. No tendency to further prolapse could be discovered three weeks after dismissal. Two of the patients had total prolapse of both uterus and vagina, and the operation was completed by low vaginofixation in the younger patient and high fixation in the patient at the climacteric age. It remains to be seen whether this doubled vaginal wall will interfere with childbirth later.

72. **Retention of Fetus After Laceration of Uterus.**—A v-para was injured in the abdomen during the seventh month of pregnancy and the movements of the fetus were no longer perceptible after the traumatism. Six weeks of good health followed, after which she applied for treatment on account of severe pains in the abdomen and slight fever. Investigation revealed a tear in the anterior wall of the cervix and in the cavity thus formed the remains of a seven-month fetus. No placenta could be discovered. Goth ascribes the rupture to the traumatism, and thinks that the uterus was rendered incapable of labor and behaved like a loose sac, as in an extrauterine pregnancy. This explains the absence of any indications of labor.

74. **Impregnation.**—Toff is convinced that the female organism is more or less essentially altered by the reception of the male semen in considerable amounts, and becomes in time impregnated with the organic juices or chemical combinations of the male organism. This influence is particularly marked, he thinks, during and following pregnancy. Elderly virgins and women who prevent conception are liable to suffer from various affections which are possibly due to the lack of the vital forces which normally are transmitted from the male to the female organism. On the other hand, the influence of the male organism may be detrimental in case it is diseased. Women, healthy until marriage, sometimes suffer from headaches, anemia, nervous affections, etc., which may be due to toxins transmitted in this way from the male. He suggests that this may prove to be one of the factors in uncontrollable vomiting of pregnancy, eclampsia, kidney affections, etc. The closer to nature the life of the people, the healthier are the men and women and the smoother the course of pregnancies and childbirth.

76. **Pessary for Large Inoperable Prolapse.**—Menge's instrument is a large oval ring with a crossbar. A pear-shaped knob fits into a hole in the center of this crossbar, after the ring has been inserted in the vagina. By its introduction in two parts, it is thus possible to use a larger ring than would be otherwise applicable, and it proves an effective obstacle to further prolapse. He calls it the "Keulenpessar," as the knob resembles somewhat the pestle of a mortar. It fits into the crossbar with a bayonet catch, and holds the ring perpendicular to the axis of the vagina.

80. **Vaginal Cesarean Section in Eclampsia.**—Duhrssen describes a case in which he delivered a primipara in severe eclampsia of a child weighing 4,500 gm. with a head circumference of 37 cm. The vagina was very narrow, but the entire operation was complete and the child extracted in eight minutes. The wound healed by primary intention; involution of uterus proceeded apparently normally and recovery was rapid. There were no convulsions after delivery. He recommends in primiparæ to previously incise the vagina, making the opening in both vagina and uterus large enough to admit a man's fist. He points out that his operation is both intra- and supravaginal, as well as bilateral on the uterus. Through the anterior incision in the vaginal wall he detaches and pushes back the bladder and processes of peritoneum without opening the

abdominal cavity, and thus frees the wall of the uterus so that after it is incised a large child can be delivered alive, as he has accomplished in his 4 cases.

82. **New Sign of Multiple Pregnancy.**—Jentzer was able to palpate two fetal heads, and mentions that when they were brought in contact they felt like billiard balls knocked together in water. In the case described the woman was delivered of triplets, but the third fetus escaped detection. This and a following birth proceeded normally, although she had been previously treated by ventrofixation for painful retroflexion. In 5 other cases of childbirth consecutive to ventrofixation the course of the pregnancy and puerperium was normal in every respect.

84. **Strychnin in Ileus.**—Grube attributes the favorable result in the case he reports to his subcutaneous administration of .01 gm. strychnin nitrate in three doses in four hours, followed six hours later by .005 gm. Peristalsis was excited; the heart symptoms subsided and the patient soon recovered. The ileus was due to severe paralysis of the intestines subsequent to removal of a purulent sacrosalpinx with suppurative encapsulated peritonitis. He adds that this case emphasizes the advantages of vaginal intervention, as the peritonitis remained circumscribed, and was not spread over the entire peritoneum as liable with a laparotomy.

86. **Self-Holding Speculum.**—Spiegel's instrument screws to the edge of the table and the speculum part is adjustable at any angle. It dispenses with the presence of an assistant to hold the speculum, and has never caused trouble of any kind during several months' experience with it in constant use at Schauta's clinic.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

88 (XXIX. 17.) *Nerve Grafting. W. Körte and M. Bernhardt.—Fall von Nervenpropfung: des Nervus facialis auf den Nervus hypoglossus.
89 Previous Warming in Steam Sterilization. R. Beckmann.—Zur Frage über die Zulässigkeit von Vorwärmevorrichtungen in Dampfsterilisatoren.
90 *Zur Färbe- (staining) Technik der Malaria-Parasiten. J. Koreck (Szerb-Csanad, Hungary).
91 Beitrag zur Serum-Behandlung der Diphtherie. Geissler.
92 Apparat zur Kochsalz-Wasser-Infusion. E. Braatz (Königsberg).
93 Medicolegal Study of Criminal Responsibility. Biberfeld.—Geisteskrankheit oder Geistesschwäche.
94 (No. 18.) *Further Attempts to Produce Specific Substances from Bacteria. L. Brieger and M. Mayer.—Weitere Versuche zur Darstellung spezifischer Substanzen aus Bakterien.
95 *Ueber den Paratyphus. H. Kayser (Strasburg).
96 Ueber einheimische Malaria und Malaria-Kachexia. Reckzeh (Berlin).
97 Balneology in the Army. Schültzen.—Ueber Verwendung balneologischer Hülfsmittel und Benutzung von Kurorten in der Armee. (Commenced in No. 17.)
98 *Treatment of Trifacial Neuralgia. C. Lilienfeld (Charlottenburg).—Zur Behandlung der Trigeminusneuralgie.
99 Training of Nurses. P. Jacobsohn (Berlin).—Zur Ausbildung der Krankenpfleger und Krankenpflegerinnen.
100 *Primäre Angina gangränosa bei einem Knaben. E. Oberwarth.
101 Protective Antidysentery Inoculation. K. Shiga.—Ueber Versuche zur Schützimpfung gegen die Ruhr. Claim for priority.
102 (No. 19.) Protozoa in Blood in Spotted Typhus. E. Gotschlich (Alexandria).—Ueber Protozoenbefunde (Aplosoma) im Blute von Flecktyphuskranken. Six cases.
103 *Artificial Production of Adhesions in Pleura for Surgical Purposes. Karewski and E. Unger.—Ueber künstliche Erzeugung von Pleuraverwachsungen zu chir. Zwecken.
104 Ueber die akute primäre Osteomyelitis der Wirbelsäule (of spine). F. Weber. One case.
105 *Volumetric Determination of Albumin in Urine. O. Rössler (Baden-Baden).—Die vol. Eiweissbestimmung im Harn.
106 *Ueber Thoracoplastik und Höhlen-Desinfektion bei Lungen-Phthise. C. Spengler (Davos-Platz). (Commenced in No. 18.)
107 Spontaneous Retrogression of Hydronephrosis in Diabetes. Zaudy.—Eine seltene Complikation des Diabetes mellitus.
108 (No. 20.) *Ueber Pulsus paradoxus. F. Riegel (Giessen).
109 *Relations of Slight Infections to the Blood-forming Apparatus. F. Freymuth.—Exp. Untersuchungen über die Beziehungen leichter Infektionen zum Blut-bildenden Apparat.
110 Influence of Removal of Liver on Freezing-point of Blood. A. Pflughoeft.—Exp. Untersuchungen über den Einfluss der Leberausschaltung auf den Gefrierpunkt des Blutes.
111 Spontaneous Recovery. After Injury of Liver and Puncture. C. Francke.—Zerreissung der Leber und eines grossen Gallengange nach Bauchpunktion spontan geheilt.
112 Athyreosis im Kindesalter (in children). R. Bartz.
113 Tropenkrankheiten und Koloniale Medizin. Steuber (Küstrin).

88. **Nerve Grafting.**—In operating on a suppurating temporal bone, the facial nerve was severed at the stylomastoid foramen, and the distal stump was fastened side by side to the hypoglossal nerve. The facial and hypoglossal domains were paralyzed for six months, the former totally, the latter partially, causing some slight disturbances in swallowing. Then gradual improvement was noted, electric excitability gradually returned, and the corner of the mouth can be now actively moved. The voluntary impulse is thus successfully transmitted to the facial muscles by way of the hypoglossal, and further improvement is anticipated in time. The partial paralysis of the hypoglossal shows that only a healthy nerve can be utilized for such grafting. The tongue still moves involuntarily with the voluntary movements in the facial domain, nearly a year after the operation, as in Kennedy's case, in which the facial muscles moved as the trapezius was contracted. Körte, in future, would choose the accessory nerve instead of the hypoglossal in such a case as paralysis in its domain is of much less importance than in the hypoglossal.

90. **Stains for Malaria Parasites.**—Koreck gives a number of formulæ for stains and shows that the age of the solution as also the amount of heat to which it has been subjected, have an influence on the result of the stain. His improved Ziemann stain is made by adding .5 gm. collargol to 100 c.c. of a 1 per cent. solution of methylene blue and using it in the proportion of 1 to .6 of the eosin solution. The resulting stain is fine in fifteen minutes or less.

94. **Production of Specific Substances from Bacteria.**—Brieger has found that it is possible to derive from a solution of typhoid cultures a non-toxic substance which confers high agglutinating power on rabbit serum, but no bactericidal or protecting properties. He describes his technic.

95. **Paratyphus.**—Kayser reports 3 cases of apparent typhoid fever in which the serum agglutinated the paratyphus bacilli, type B, while it had no effect on true typhoid bacilli. Two of the patients were sisters about 25, the third a child of 8. There was no albuminuria, but severe headache in the 2 first and edema of the lids and painfulness of the spine in the latter case. He adds that experience with these paratyphus cases to date indicates that the infection is mild, but that in testing for the agglutination both type A and type B of the paratyphus bacillus must be tested. He protests against the use of the term typhoid instead of typhus, claiming that the former should be restricted to "ileotyphus."

98. **Electromagnetic Treatment of Trigeminal Neuralgia.**—Lilienfeld has cured 11 and materially improved 65 out of a total of 90 cases of trigeminal neuralgia treated by electromagnetic seances. Almost all his patients had suffered for years from neuralgia, some for ten to twenty-five. He describes 7 typical severe cases in detail. In one the pain was mitigated after the fifth application of the alternating magnetic field, 15 amperes. By the fifteenth the patient was freed from pain during the day, and by the thirtieth entirely relieved except for occasional comparatively slight twinges during the night. Treatment was interrupted at this point, but the improvement has continued for three months to date. In another very severe case after twelve years of suffering the patient was dismissed completely cured by a course of 50 applications. All these chronic cases had been previously treated with the usual measures without avail, and even if the neuralgia should return later, the months of freedom from pain are certainly an immense gain.

100. ***Primary Gangrenous Angina.***—The patient was a lad of 12 who had passed through measles and typhoid in early childhood. The malignant angina developed with exacerbations. The first stage was characterized by pains in ear and neck on right side, subsiding after a week; two weeks later pains occurred in the ear and neck, and the tonsil, palate and uvula on the left side were found to be ulcerated. The ulcerations healed and for ten days there was no further trouble, but then a gangrenous abscess developed in the right tonsil, and ten days later in the left. The spleen was enlarged. The angina retrogressed by the end of ten days, leaving merely a whitish deposit on the right side of the throat. A few days

later severe symptoms again appeared, with high fever, pains in the left side of the neck and petechiæ. This stage also subsided, and for a month the little patient seemed well, except for a transient attack of heart weakness. The fifth and fatal stage then set in and the gangrene in the throat spread with a fatal termination in ten days. The petechiæ during the last three stages were noticeable, as also a severe hemorrhage from the retina during the terminal stage. Numerous internal hemorrhages were also observed at the autopsy. In this, as in 2 other cases on record, a loud systolic murmur was heard during the last stages of the affection, but the assumption of a vitium cordis was not confirmed by the autopsy. Treatment had been energetic, with lactic acid, etc.

103. Artificial Production of Pleural Adhesions for Surgical Purposes.—Karewski proclaims that he has succeeded in inducing effective adhesion by means of a combination of chemical irritation, trauma and prevention of displacement of the sheets of the pleura. He accomplishes this by the use of silk threads impregnated with turpentine, uniting the interspaces with the lung pleura. The turpentine suture attracts the leucocytes and entails a deposit of fibrin, thus walling off the part of the lung desired with a broad sheet of adhesions or merely a circular wall, according to the way the sutures are applied, either parallel through the interspaces or circular around the focus. His experiments were made on large dogs, and he found that in three days firm union was realized by this means over a flat surface. Linear adhesions required a few more days to form a strong enough wall. He thinks that the conditions in man would be much more favorable for the formation of adhesions by this technic.

105. Volumetric Determination of Albumin.—Rössler states that it is possible to determine the amount of albumin in the urine, even in a proportion of 1/120,000, by means of a mixture of 2 parts succinic acid, 1 part sublimate, .1 part sodium chlorid and 50 parts distilled water. Three drops are added to 5 c.c. of dilute acetic acid and the urine added to form a layer, as in the potassium ferrocyanid test, of which this is a modification. The height of the white zone that forms from the combination with albumin indicates the amount of the latter. It is measured with a compass and by comparison of the results obtained at rest, after exercise, medication, baths, etc., a characteristic curve is obtained. The increase in the amount, after walking for an hour, after two hours' mountain climbing, etc., was much more marked in case of kidney disease, and the method is thus able to reveal the latter in its incipiency. Kussmaul adopted the following system: the first day the albumin was determined during complete rest; the second day after an hour's walk and the third day after two hours' moderate mountain climbing. In case of mere spermatorrhea the curve was flat or dipped slightly down, as was also the case when the albumin was due to the presence of pus in the urine, but in case of kidney disease, the curve rose each day, and the third day was nearly three times the height of the first day. In case of kidney disease with spermatorrhea the ascent to the third day was more gradual and not so high at the last, as in case of kidney disease alone. In case of a suppurative affection of the bladder or uterus in addition to the kidney affection, the height of the zone was above that of the other curves on the first day and considerably higher on the two following days. The curves thus obtained correct many a mistaken diagnosis. In one instance they contradicted the assumption of a kidney affection for which the patient had been treated elsewhere for two years. Catarrh of the uterus was diagnosed and the patient promptly cured by appropriate treatment.

106. Thoracoplastic Operation and Disinfection of Lung Cavities.—Spengler advocates disinfection of the lungs in case of tuberculosis or other severe affections of the respiratory passages, by means of inhalation of a mixture of 5 c.c. formalin, 20 c.c. absolute alcohol and 75 c.c. ether. Ten drops of this mixture are poured into a tumbler and inhaled in ten deep breaths through the opened mouth once every second day, or five drops morning and evening on alternate days. After fourteen days of these inhalations he suspends them for several days. He has never seen any harm from these doses even when long continued, and some of his patients inhaled as much as forty drops six times a day, but he found that these larger amounts depressed the vitality and thus favored bacterial proliferation. He, therefore, warns against more than ten drops on alternate days, continued with interruptions until the bacilli have disappeared from the sputum. In case of laryngeal tuberculosis, once in three days is probably sufficient and caution is also needed with nephritic patients. Pure formalin is too irritating and not volatile enough. Even in advanced cases the measure is useful for the protection of others. It should be used in all cases of cavity formation with rigid walls and inadequate evacuation of the products in the cavity. In case it fails to relieve after thorough trial, he urges resection of ribs to mobilize the thorax and thus allow the parts to expand and contract. But the inhalations will frequently reduce the suppuration to such a point that intervention is not required and many cases of phthisis with cavities heal in a remarkably short time. He has performed such a thoracoplastic operation eight times and one of the patients is clinically cured. All were cases of severe bilateral infection. His experience indicates that the sweats in tuberculosis aid in the absorption and elimination of the exudate in the lungs, and should not be suppressed. The amount of sputum in twenty-four hours and physical examination are aids for locating and measuring the size of the cavity. Inhalation of the "F.-A.-E. mixture" described above causes, in isolated cases, rapid decrease in the amount of sputa and number of bacteria, both the tubercle bacilli and others, but this occurs only in favorable circumstances. When there is active mixed infection, the germs ensconced deep in the parenchyma of the lung, inaccessible to the formalin vapors, the results will be meager or negative. He illustrates and describes the technic of the thoracoplastics which he recommends.

108. Pulsus Paradoxus.—Riegel distinguishes three causes for this condition. In the first group it is the result of compression of the large vessels from the effects of mediastino-pericarditis. The swelling of the veins in the neck during inspiration is important in the differentiation of this group. The heart is not implicated in the production of the paradoxical pulse but rather works with extra energy on account of the resistance in the aorta. The apex beat is not weaker during inspiration but stronger than usual, as also the heart sounds. In the two other groups the pulsus paradoxus is the expression of impaired heart action. In one the cause is interference with the intake of air, as in laryngeal stenosis, pneumonia, capillary bronchitis, etc. As the air can not enter freely, the negative pressure during inspiration is increased, and the *normal inhibiting influence* of inspiration on the heart is unduly magnified. If tracheotomy is done the paradoxical pulse disappears at once. In the other of these two groups the cause is to be sought in the enfeeblement of the heart, which is unequal to its task. In such cases the paradoxical pulse may vanish on exhibition of digitalis. Distinction of these three types of causes is important for treatment, although it is possible for two or more of them to be associated in a case.

109. Relations of Mild Infections to the Blood-Forming Apparatus.—This communication from Koch's Institute for Infectious Diseases announces that minute doses of infectious germs, so small as to be unable to produce any symptoms in the laboratory animals, yet exerted a specific influence on the blood-forming apparatus, stimulating it to unusual activity. Even a very mild infection, therefore, may be able to excite this apparatus to abnormal functioning, a fact important for the clinic. Not only the bacteria but even their dissolved toxic products exerted this influence. This fact may explain the puzzling anemias noted in chronic obstipation. Also the abnormal heart action, the nervous symptoms, general and local, the depression, etc., may be due to absorption of toxic substances from the intestines and to their influence on the blood-forming apparatus, as whenever this apparatus is unable to fulfill the extra demands on it, its functions must suffer, and principally the regeneration of the blood. Many puzzling cases of anemia and chlorosis may be the result of some apparently insignificant infection and its effect on the hematopoietic organs. In such cases infection in the respiratory, digestive and female genital organs must be excluded before we can institute appropriate treatment.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U. S. A. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume I. Thirteenth Series, 1903. Cloth. Pp. 306. Price, $2.00. Philadelphia: J. B. Lippincott Co. 1903.

A System of Physiologi [illegible] A Practical Exposition of the Methods, Other [illegible], Useful for the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College. Volume X. Pneumotherapy, Including Aerotherapy and Inhalation Methods and Therapy. By Dr. Paul Louis Tissier, One-Time Interne of the Paris Hospitals. Illustrated. Cloth. Pp. 479. Price, $27.50 per set. Philadelphia: P. Blakiston's Son & Co. 1903.

The Surgical Diseases of the Genito-Urinary Organs. By E. L. Keyes, A.M., M.D., LL.D., Consulting Surgeon to the Bellevue, and E. L. Keyes, Jr., A.B., M.D., Ph.D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital. A Revision of Van Buren and Keyes' Text-Book. With 174 Illustrations in the Text and 10 Plates, 8 of Which Are Colored. Cloth. Pp. 827. Price, $5.00. New York and London: D. Appleton & Co. 1903.

Bacteriology. A Manual for Students and Practitioners. By Ferd. C. Zapfee, M.D., Professor of Pathology in the Illinois Medical College. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University. Illustrated with 146 Engravings and 7 Colored Plates. Cloth. Pp. 350. Price, $1.50 net. Philadelphia and New York: Lea Brothers & Co.

Diseases of the Heart and Arterial System, Designed to Be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H. Babcock, A.M., M.D., Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago, Ill. With 3 Colored Plates and 139 Illustrations. Cloth. Pp. 853. Price, $6.00. New York and London: D. Appleton & Co. 1903.

Practical Handbook of the Pathology of the Skin. An Introduction to the Histology, Pathology, and Bacteriology of the Skin, with Special Reference to Technic. By J. M. H. MacLeod, M.A., M.D., M.R.C.P., Assistant in the Dermatological Department, Charing Cross Hospital. With 8 Colored Plates and 32 Black and White Plates. Cloth. Pp. 408. Price, $5.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M.A., M.D., LL.D., Professor Emeritus of Materia Medica, General Therapeutics, and Hygiene, in the Jefferson Medical College of Philadelphia. Eleventh Edition, Revised and Enlarged. Cloth. Pp. 866. Price, $5.00. New York and London: D. Appleton & Co. 1903.

Hygienic Laboratory. Bulletin No. 10. M. J. Rosenau, Director. February, 1903. Report on the Prevalence and Geographic Distribution of Hookworm Disease in the United States. By Ch. Wardell Stiles, Ph.D., Chief of Division of Zoology. Paper. Pp. 121. Washington: Government Printing Office. 1903.

Wild Oats. A Sermon in Rhyme. By Maurice C. Hime, M.A., LL.D., Sometime Head-Master of Foyle College, Derry. Cloth. Pp. 49. Price, One Shilling. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

Transactions of the American Roentgen Ray Society. Third Annual Meeting, Chicago, Ill., December 10 and 11, 1902. Paper. Pp. 178. Louisville: Courier-Journal Job Printing Co. 1903.

The John Crerar Library. Eighth Annual Report. For the Year 1902. Paper. Pp. 45. Chicago: Printed by Order of the Board of Directors. 1903.

Practical Synonyms. By John H. Bechtel. Cloth. Pp. 226. Chicago, New York and London: Page Davis Co.

Second Annual Report of the Lewis Hospital of Bay City, Mich., Jan. 15, 1903. Paper. Pp. 25.

The Public Service.

Army Changes.

Movements of officers of the Medical Department, U. S. A., under orders from the Adjutant General's Office, Washington, D. C., for the week ending May 30, 1903:

Ashburn, James K., contract surgeon, is granted an extension of leave for ten days.

Farr, Charles W., first lieut. and asst.-surgeon, granted leave January 28, has extension of two months, and is changed to two months' sick leave from April 26, 1903.

Fanning, George J., contract surgeon, is granted an extension of leave for one month from May 22.

Gorgas, William C., colonel and assistant-general, now on leave in New-York City, will report on June 1 to the commanding general, Department of the East, for temporary duty as chief surgeon of that department during the absence on leave of Colonel Henry Lippincott.

Gregory, William G., contract surgeon, is granted leave for one month on surgeon's certificate, with permission to leave the Department of California and is granted permission to apply for an extension of one month.

Godfrey, Guy C., captain and asst.-surgeon, is relieved from further duty in the Division of the Philippines, and will proceed to San Francisco, Cal., and report by telegraph to the Adjutant General of the Army for further orders.

Jones, George H., contract surgeon, now on leave at Toledo, Ohio, is relieved from further duty in the Division of the Philippines and will proceed to Fort Fremont for duty, to relieved Contract Surgeon J. Randolph Harmer, who will proceed to Fort Totten for duty.

McCulloch, Champe C., Jr., captain and asst.-surgeon, is relieved from further duty in the Division of the Philippines and will proceed to San Francisco, Cal., and report by telegraph to the Adjutant General of the Army for further orders.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 29, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 16-23, 4 cases.

California: Los Angeles, May 8-16, 1 case; San Francisco, May 10-17, 2 cases.

Colorado: Denver, April 25-May 2, 19 cases.

Illinois: Belleville, May 16-23, 1 case; Chicago, May 16-23, 9 cases.

Indiana: Elwood, May 17-24, 6 cases; Indianapolis, May 16-23, 3 cases.

Iowa: Des Moines, May 16-23, 1 case.

Kentucky: Newport, May 8-23, 2 cases.

Louisiana: New Orleans, May 16-23, 4 cases.

Maine: Biddeford, May 16-23, 1 case.

Maryland: Baltimore, May 16-23, 1 case.

Massachusetts: Holyoke, May 16-23, 1 case.

Michigan: Detroit, May 16-23, 25 cases, 1 death; Grand Rapids, May 16-23, 1 case; Port Huron, May 16-23, 1 case.

Minnesota: Winona, May 16-23, 3 cases.

Missouri: St. Louis, May 17-24, 20 cases.

Nebraska: Omaha, May 16-23, 1 case.

New Hampshire: Manchester, May 16-23, 4 cases; Nashua, May 16-23, 6 cases.

New Jersey: Camden, May 16-23, 1 case.

New York: Elmira, May 16-23, 1 case; New York, May 16-23, 1 case; Rochester, May 14-21, 6 cases.

Ohio: Ashtabula, May 16-23, 2 cases, 1 death; Cincinnati, May 15-22, 15 cases; Dayton, May 16-23, 5 cases.

Pennsylvania: Altoona, May 16-23, 1 case; Carbondale, May 14-21, 1 case; Johnstown, May 16-23, 1 death; McKeesport, May 16-23, 1 case; Philadelphia, May 16-23, 18 cases, 4 deaths; Pittsburg, May 16-23, 24 cases, 3 deaths, 1 case imported from West Virginia; Reading, May 18-25, 1 case.

South Carolina: Charleston, May 16-23, 10 cases, 1 death.

Utah: Salt Lake City, May 16-23, 3 cases.

Wisconsin: Milwaukee, May 16-23, 1 case.

SMALLPOX—FOREIGN.

Brazil: Rio de Janeiro, April 26-May 3, 1 death.

Canada: Winnipeg: May 9-16, 1 case, 1 death.

Canary Islands: Las Palmas, April 25-May 2, 18 cases.

China: Hongkong, March 28-April 11, 2 cases, 1 death.

Colombia: Barranquilla, May 3-10, 3 deaths: Bocas de Toro, May 25, 25 cases, 2 deaths.

Great Britain: Birmingham, May 2-16, 24 cases; Dublin, May 2-9, 27 cases, 4 deaths; Dundee, May 2-9, 1 case; Glasgow, May 8-15, 1 case; Leeds, May 2-16, 34 cases, 3 deaths; Liverpool, to May 16, 6 deaths; London, May 2-9, 17 cases; Manchester, May 2-9, 10 cases, 1 death; Newcastle-on-Tyne, May 2-9, 1 case; Nottingham, May 2-9, 2 cases; Sunderland, May 2-9, 1 case.

India: Bombay, April 21-28, 94 deaths; Calcutta, April 18-25, 3 deaths; Madras, April 18-25, 1 death.

Mexico: City of Mexico, May 10-17, 11 cases, 7 deaths.

Russia: Moscow, April 25-May 2, 2 cases, 1 death.

Spain: Valencia, April 15-30, 2 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 26-May 3, 13 deaths.

Colombia: Panama, May 11-18, 3 cases, 1 death.

Costa Rica: Limon, April 30-May 14, 5 cases, 2 deaths.

Mexico: Coatzacoalcos, May 8-16, 1 case; Tampico, May 8-16, 1 death; Vera Cruz, May 16-23, 12 cases, 7 deaths.

CHOLERA.

India: Calcutta, April 18-25, 140 deaths.

Straits Settlements: Singapore, April 4-11, 3 deaths.

PLAGUE.

Brazil: Rio de Janeiro, April 26-May 3, 2 deaths.

Chile: Iquique, May 27, present.

China: Hongkong, January 1-April 11, 216 cases, 208 deaths.

India: Bombay, April 21-28, 1,031 cases; Calcutta, April 18-25, 434 cases; Karachi, April 19-26, 228 cases, 197 deaths.

Japan: Yokohama, May 26, present.

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Original Articles.

INDICATIONS FOR CHOLECYSTECTOMY.[*]

BYRON B. DAVIS, M.D.
Professor of Principles of Surgery and Clinical Surgery, College of Medicine, University of Nebraska; Surgeon to Immanuel and to Wise Memorial Hospital.
OMAHA.

The primary object of every surgical operation is to secure the completest and quickest relief compatible with safety. If it can be shown that in certain specified conditions of the gall bladder cholecystectomy is followed by more perfect restoration to ideal health, by a prompter convalescence, and that the mortality is no greater than in cholecystostomy, my point is made.

Cholecystostomy is frequently disappointing, the hoped-for benefits are only partially realized and the patient still has pain. Of my last twenty-eight cholecystostomies, six are known to have pain, not so severe as before the operation, but enough to be a source of worry and inconvenience. This means more than 20 per cent. of failures to accomplish fully what was attempted. Hans Kehr reports that in more than 17 per cent. of his cholecystostomies the relief was only partial. Others report the same disappointing results.

When we face squarely the fact that in any operative procedure there is to be considered not only the primary mortality but also the knowledge that about one patient out of five will be only partially relieved, some of them indeed almost as great sufferers as before, it is a humiliation to surgical pride. If improvement in technic will not give better results, no true surgeon will be satisfied until some other measure is found more satisfactory, really curative.

A prolonged convalescence, though not an insuperable objection to an operative procedure, if finally followed by entire relief, is to be deplored. After draining the gall bladder till the infection is removed the fistula quickly closes in many cases, but in a startling number a chronic fistula follows, most of them finally healing, but after so long and disagreeable delay that many times the patient regrets ever having the operation. In the twenty-eight cases of drainage mentioned three fistulæ discharged for many months, but finally healed; one is still discharging after six months, and three continued to discharge until cholecystectomy was done. Twenty-five per cent. of chronic fistulæ seems a good many, but it occurred in this series and, judging from the number of fistulæ I have seen after operations by other surgeons, the conclusion can not be dodged that this is a standing opprobium to this form of operation.

In simple uncomplicated cases the operative mortality for cholecystostomy ought to be very low. Kehr gives his as 2 per cent. In the cases complicated by dense adhesions, atrophy of the gall bladder, acute infections and the like, the mortality is considerable. Kehr admits a mortality of 47 per cent. in this class of cases. Some of his cases were operated on a number of years ago. With the present perfected technic it is probable that it would be considerably less, though bound always to be high. The fact can not be evaded that with the serious complications met in all old cases and in the acute infections (empyemas, gangrene, etc.), the dangers from any operation are great, and in many we must be satisfied to do what will tide the patient over until in such condition as to be able to withstand such an operation as will bring relief.

Kehr has found that less than 1 per cent. of his cholecystectomies continued to have symptoms. All the rest were completely cured. Absence of all disagreeable sensations has been noted in all of my cases in which cholecystectomy has been done, though in two of them still under treatment it is too early to know the result.

After cholecystectomy the convalescence is very rapid. As a rule there is no discharge, though in occasional cases where infection of the ducts is present, closure of the cystic duct has not been deemed advisable. Even in cases drained in this manner healing has been prompt. No mucous fistula due to a diseased gall bladder poorly drained has been present. In ten out of twelve cases the wound has been closed in a week to ten days.

Kehr's operative mortality for cholecystectomy is 3.3 per cent., as against 2 per cent. for uncomplicated cholecystostomies. There is abundant reason to believe that many of his cholecystectomies would be considered complicated, so this seems an excellent showing for cholecystectomy. In my own cases since Jan. 1, 1902, there have been twelve uncomplicated cholecystostomies, with no deaths; sixteen complicated cholecystostomies, with three deaths (one of these I feel certain would have recovered had cholecystectomy been done); twelve cholecystectomies, with one death, a very badly complicated case.

Why are so many cases uncured after cholecystostomy? The answer to this question I believe to be found in the amount of pathology left behind. Adhesions to the pylorus cause dragging on the stomach, with resulting gastric symptoms. Adhesions to the intestines produce painful sensations during active peristalsis. There are often a number of conditions of the gall bladder following cholecystostomy, which seriously interfere with perfect emptying of the viscus: 1, Adhesions to neighboring viscera; 2, crippling of the gall bladder from inelasticity of its walls; 3, partial occlusion of the cystic duct; 4, interference with the perfect contraction of the walls during the effort to empty itself, due to the fundus being fixed to the anterior abdominal wall; 5, the weight of the liver pressing down on the anchored gall bladder.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

The number of cases demanding surgery of the gall bladder in which the cystic duct is normal and in which the mucous membrane is intact and the walls normally elastic, is only a small minority. Such cases will usually close promptly after simple drainage. But when any of the above conditions are present, prolonged and imperfect convalescence is to be expected.

The advantages of cholecystectomy are to be found in all the conditions which render cholecystostomy unsatisfactory and disappointing: 1, When the cystic duct is wholly or partially occluded healing is prompt and complete; 2, when the wall of the gall bladder is thickened, friable and atrophied, the functionless viscus is taken out and can no longer torment the patient; 3, when there are adhesions they will remain as long as a pathologic gall bladder is present to keep up the irritation; 4, it is a well-known fact that intra-abdominal adhesions gradually weaken, stretch and disappear when there is no disturbing element; 5, the value of the gall bladder as a reservoir for the bile is *nil,* and functionally it serves no more useful purpose than does the vermiform appendix; 6, after a gall bladder has been as profoundly diseased as it usually is when made the object of surgical attack it never regains its normal state and is henceforth not only valueless but, on account of its defective drainage, is constantly subjected to the risks of fresh infection; 7, the cholesterin, which is the principal element of almost all stones, is only elaborated in such a quantity as to do harm by the epithelium of the gall bladder when infected, being due to degeneration, therefore, when removed, all danger of future stone formation is at an end; 8, it is estimated that at least 5 per cent. (Mayo) of the cases of serious disease of the gall bladder are followed eventually by carcinoma; removal will take away this menace.

A number of gentlemen who have written on this subject seem to regard cholecystectomy as especially dangerous where adhesions are numerous. Some of the most satisfactory results I have obtained have been in this class of cases and, as all know, adhesions are inimical to complete relief when cholecystostomy is performed. A gangrenous gall bladder is safer outside the abdomen, and, even though the operation requires a little longer time than simple drainage, I believe the risks of a slightly longer operation are more than offset by the more favorable condition following complete removal. When the operation is for empyema, more or less destruction of the mucous membrane of the gall bladder and cystic duct is to be expected and retention of such a viscus will probably result in only partial relief.

It must be admitted that there are some conditions where the simplest and quickest surgical procedure possible to give temporary relief is as much as the patient can bear. Here simple drainage may be done, to be followed later by cholecystectomy if complete relief is not obtained. In cases where there is temporary or permanent closure of the common duct this operation is, of course, not to be thought of.

To some the existence of infection has been deemed a contraindication to cholecystectomy, since it is in violation of the cardinal principle in these cases, drainage. It is as easy to secure drainage when the gall bladder is removed as when it is retained. In four of my cholecystectomies, instead of ligating the cystic duct, W. J. Mayo's method of removing the mucous membrane has been used. The greater part of the gall bladder is removed. Beginning a short distance above the cystic duct the mucous membrane is stripped off and removed down into the duct. Then a purse-string suture is introduced around the cuff of muscle and peritoneum and tied over the end of the drainage tube. It drains as perfectly as when the entire organ is retained, and closes quickly when the drainage tube is removed.

When the common duct is patulous and is not constantly being infected afresh from a septic gall bladder it seldom needs external drainage. The voluminous flow of bile through the hepatic and common ducts tends to sweep infective material into the bowel. The need of drainage in these cases is usually not to be found in the ducts but in the infected and crippled gall bladder. Surgeons who have once tried cholecystectomy are constantly resorting to it for an increasing number of indications. The operative mortality, immediate and remote, seems no greater than that from cholecystostomy when both complicated and uncomplicated cases are taken into consideration. The rapidity of convalescence is certainly a powerful argument in favor of the more radical procedure. The strongest inducement in favor of cholecystectomy is the complete relief it gives, in striking contrast to the painful and dragging symptoms which so frequently remain after cholecystostomy.

THE CALL FOR EXPLORATORY OPERATION IN THE GALL-BLADDER REGION.*

F. A. DUNSMOOR, M.D.
MINNEAPOLIS.

The surgical age is on, and it is to the credit of the profession that this is true. It were trite to cite cures where drugs have been used to worse than waste precious time, followed by an operation which has brought relief, comfort and usefulness to patients who were a burden to themselves and friends. It is not our intention to criticise former practice of the internalists or surgeons. It is not ages ago that each was barbarous in both senses of the word. It is an old tale to this body to be told of the safety of abdominal incisions when absolute cleanliness and skill attend the operation. Hence this word as advocating such procedure as a simple means of diagnosis and a long step toward the best method of cure.

The diagnostician has continually in his mind's e
a map of the surface of the body, and knows what no
mally should be hidden beneath each square inch thereo
irrespective of the attitude, posture or part presentin
He reviews the physiologic functions and possible
probable pathologic lesions, and still may have anoth
guess coming. Nevertheless, a writer for one of ou
medical journals has said that no man should make a
abdominal section until competent to certainly forete
the exact pathologic condition for which the operatio
was to be made. Mindful of this demand by critics, th
writer hesitated to advance the suggestions of this essa

Dividing the abdominal cavity equally into two zone
the upper will always be the field of most difficult su
gical maneuvers, whose tumors are more frequently m
lignant and their cure impossible; while the lower pro
vides the opportunities for brilliant recoveries to th
beginner. This truism is magnified in the right hypo

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* Read at the Fifty-fourth Annual Session of the Americ
Medical Association, in the Section on Surgery and Anatomy, a
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Ochsner, J. E. Moore and De Forest Willard.

chondrium, because of the important glands, ducts and vessels therein contained.

Neoplasms or inflammatory products in the pelvis have fixed walls for their protection, with only slight disturbance from excretory functions, while pathologic changes in the proximity of the chest wall are subject to continued irritation due to respiratory movements, as well as pressure from the almost continual variation of body posture.

Often the resulting exudates and adhesions of salpingitis are painless, while adhesions from an old or new pleuritis give rise to stabbing pain from movements, like sneezing, coughing or muscular effort.

Any maneuver separating the adhesions would be of great benefit. Similar results obtain when the lesion is immediately below the diaphragm. There, however, pain is frequently associated with gastrointestinal disturbance and concomitant involvement of the liver, pancreas, large glands, or a movable kidney. These facts indicate a greater demand for surgical attention to manifestations of disease here than in the famous pelvic region.

An incision through the upper right semilunaris is practically bloodless and has, *per se*, no mortality, and yet what a field for investigation! Beneath the space not larger than the palm of one's hand, and with the center midway between the tenth rib and the umbilicus, we find the gall bladder, hepatic and pancreatic ducts, part of the liver and kidney, the pyloric end of the stomach, part of the duodenum, colon, omentum, mesentery and important vessels. When diseased, many other important structures have occupied this space. Clinically, we are supposed to be able to diagnose gallstones. Thirty years' personal observation, W. Mayo's St. Mary's Hospital reports, and postmortem findings the world over, show that they are oftener overlooked than found. Pancreatic disease is much more obscure. Abscess of the liver, or hydatids, cancer of pylorus, usually definitely proclaim their presence. There remain, however, many inflammatory and non-malignant conditions which leave vague contradictory or puzzling symptoms, following one or more acute attacks of various affections incident to this location. Selecting only those not benefited by drugs or massage, but aggravated by driving, riding, jolting or by ordinary manual labor, we have abundant reason for exploratory and radical surgery in this region. The arrangement and anatomic support of the upper abdominal viscera are such that the danger of a hernia following section of the abdominal wall here is much less than below the umbilicus. The same causes make greater probability of permanent cure following division of adhesions.

It has been quite common to discourage any operation in the region of the gall bladder until the surgeon was confident of finding stones. The same may be said of operations looking to examination of the kidney. Pancreatic disorders and disease of the blood vessels are free from liability of harm from such investigation through an incision at this point, or through the linea alba. There are many cases in which a reasonably certain diagnosis of disease of the gall bladder is made, when it is not expected that calculi are present; but we may wish to drain through the kidney pouch for empyema, or chronic catarrh, or examine for results from trauma.

When we contemplate the important organs which may be readily and with great safety thoroughly examined through a window in the right hypochondrium, we shall find at least a reasonable excuse for the exploratory incision, which has so often been the open door for relief of undiagnosed pathology of the lower abdomen.

Case 1.—J. S., Kidder, N. D., farmer, aged 28, family history negative. In spring of 1896 had an attack of vomiting with pain over stomach which lasted two months. Has had severe recurrence each year, one beginning a year ago, and has been constant since. Operated on May, 1902. No gallstones, but vermiform appendix inflamed and adherent to gall bladder and liver. Appendix removed, adhesions separated and colon replaced in normal position. Good recovery and present health good.

Case 2.—G. F. P., Wilmot, S. D., senator, aged 40. For two years has had "spells" of pain in right side in hepatic region. When the attack was severe the pain would extend from shoulder to groin and be attended with jaundice. Present attack began one month ago with icterus and putty-colored stools. Operated on Sept. 7, 1902. No calculi in bladder or ducts. Evidence of local inflammation and adhesions. Latter broken up. Uneventful recovery.

Case 3.—Mrs. N. S., housewife, aged 23, emaciated, anemic, jaundiced and neurasthenic. Had hepatic colic three years ago, passed stone; several attacks since; last three weeks ago. Patient constipated, has clay-colored stools, pain over gall bladder, usual gallstone symptoms. Operated on at Asbury Hospital March 11, 1901. Incision right of rectus, gall bladder found twisted and bent or doubled on itself. Covered with adhesions of omentum to gall bladder and liver. No stones present, all adhesions divided; gall bladder liberated, wound closed; uneventful recovery, icterus gone. Good health reported November, 1902.

Case 4.—C. S. P., Estelline, S. D., male, farm owner, aged 45, member house of legislature. Entered Asbury Hospital Oct. 14,1901. Father died at 71 of "heart failure"; mother living and well; two brothers died in infancy; one sister had consumption at 22. Patient has always been well until some time in June, 1900, when he had very severe pain in right hypochondriac region, requiring opiates. Severe pain ceased one month ago, leaving a sore spot to right of ensiform cartilage. Sept. 1, 1901, he had another attack, and again October 1. Operated on Oct. 15, 1901. No gallstones in bladder or ducts. Extensive adhesions; frail-like mesh work extending widely under lower surface of liver, extending to stomach covering in gall bladder and intestines. Have seen this patient twice during past two years, has gained 30 pounds and has had no further trouble.

Case 5.—Miss B., Drayton, N. D., student, aged 19. Family history good. Present illness began four years ago with pain in right side. No tenderness until last year, when point of pain located between crest of ilium and lower rib. Patient neurotic and has lost much flesh the last six months. Operated on at Asbury Hospital April 5, 1902. Incision in upper right semilunaris, found omentum massed in right side with evidence of inflammation extending from colon to liver. Coils of intestine and omentum adherent to right mural peritoneum. No stones in gall bladder. Appendix removed. Patient had peritonitis for two weeks and convalesced slowly. A week later had an attack of dyspnea, feeble pulse, lividity and was evidently near dying. Had dilated heart. Recovered in two weeks, so as to be able to return home. Returned to hospital Nov. 1, 1902, with pain in right ovarian region. Has gained 40 pounds in flesh and has bright, rosy cheeks. Was put under local treatment of douche and external massage for two weeks with no benefit. Operated on November 16, removing left ovarian cyst three inches in diameter, also removed right tube for extensive salpingitis. Is about the hospital, complains of neuralgic pains in various parts of the body.

This group of cases simply shows benefits from so-called liver cases which drugs and diet did not help. Case 3 is evidence that gallstones may be expelled by way of the bile ducts and leave more pathology behind than their presence manifested.

In Case 4, although the appendix was involved, the condition and symptoms warranted the conclusions that the pathologic conditions began at the gall bladder and a general peritonitis followed, finally involving the pelvic organs. Had this case been explored four years earlier, I have no doubt the ovaries could have escaped disease and removal.

DISCUSSION

ON PAPERS OF DRS. DAVIS AND DUNSMOOR.

Dr. William J. Mayo, Rochester, Minn.—Dr. Dunsmoor has called our attention to the necessity of frequent operation in the region of the gall bladder. Let us not forget that there are two kinds of diagnoses; one that is exact, in which we know what we are going to do, and the other a diagnosis, which must be very commonly made, in which we can not say exactly what the condition is, but in which we do know that a condition exists which can probably be relieved only by surgical interference and, therefore, a diagnosis that would necessitate surgical interference need not necessarily carry with it an accurate diagnosis of the condition that we expect to find.

I am most heartily in sympathy with the general idea of the paper by Dr. Davis that the gall bladder should be removed, if we can do so safely. But we can not always do this. These people are sometimes very fleshy, and possibly have degenerative lesions, which may be at an advanced stage. Therefore, it is wise to study up the causes that have given us the after-trouble in the past following cholecystostomy, so that we can say to ourselves at the operating table, this case should have the gall bladder removed; this case may not need it. Some time ago I went over the causes of death in our series of several hundreds of operations on the gall bladder and there was but one from peritonitis. The danger of peritonitis, if proper gauze protection is employed during operation, is not great. The cause of death is more frequently suppression of the liver function. The liver has carried to it certain infectious material, and if its action is not good, that patient may die from suppression of the liver function, in from forty-eight to seventy-two hours, and this class of cases constitutes about one-third of our death rate. Therefore, we must say to ourselves, there is a class of cases in which there is a certain amount of increased danger attendant on the removal of the gall bladder, and experience has taught us that it is not necessary. What class of cases is it, then, that we can say to ourselves that it is wise for us to remove the gall bladder? It is those cases in which there is stone in the cystic duct or obstruction of the gall bladder, for here future trouble with drainage may cause colics or fistula. In cases in which the gall bladder is obstructed at the cystic duct, I think it should be removed. But if the gall bladder contains bile and the cystic duct is freely open, and one ties it, there will possibly be some deaths from suppression of the liver function; and, therefore, I make it a rule, in cases where the cystic duct is freely open, where there is bile in the gall bladder and the gall bladder is more or less infected, to provide for drainage through the cystic duct, either by doing a cholecystostomy or by amputating the fundus of the gall bladder and removing the mucous membrane from the base. In this way, the cystic duct can be divided and left open for drainage of bile to the surface, the outer coats of the base forming a pouch into which a drainage tube can be securely fastened against the open cystic duct and safely carry the bile without leaking. This gives the benefit of temporary hepatic drainage, with the permanent effects of cholecystectomy.

Dr. J. B. Murphy, Chicago—Dr. Davis has stimulated my courage to take out more gall bladders in the future than I have in the past, and I am a coward in doing any class of surgery that I believe increases the risk to the patient. All the time, I have been asking myself the same questions that Dr. Mayo has; why should we not have a return of the symptoms, if we do not remove the gall bladder, and, indeed, I am not sure that we do not sometimes have a return of the symptoms even after the gall bladder has been removed. The principal causes of the return of the symptoms are two: remaining stones and affections of the cystic duct. Therefore, if these are the two principal sources of the return of the symptoms, it means that the symptoms recur as a result of imperfect operative procedure in the first operation, and I personally plead guilty that my early operations were not as good as they are now, and I frequently have recurrences even now. Now, this brings us to the consideration of the two elements of the primary operation, namely: first, the thorough examination of the cystic duct to see if there are any stones remaining, and second, a careful examination and removal of any adhesions which may be on the lower side. These two elements, I believe, will contribute to the improvement of our results without increasing the risk to the patient. Personally, if I could with equal safety feel that the gall bladder could be removed without interference with the function of the liver, I would do so. The mortality in these operations is 47 per cent. I do not know of any work in the region of the gall bladder that gives that percentage, and I am against any operation that reaches such a high mortality. Where infection is present, and where the infection has been multiplied for weeks, I do not feel like doing any more surgery than is absolutely necessary for drainage.

In reference to Dr. Dunsmoor's remark that we must do more work of an exploratory character in the region of the gall bladder, where the symptoms of pain are absent, I think if we would follow out his suggestions in this direction we would receive very good results, with very little risk to the patient.

Dr. A. J. Ochsner, Chicago—This condition of untreated gall bladder cases exists in nearly every part of the country. This condition was impressed on my mind most forcibly by Dr. Mayo some years ago, when I observed his many operations for this condition. In reply to my inquiry in regard to the reason why he obtained, relatively, so many of these cases, he replied that he made the diagnosis. He did not say this to be quoted, and he did not think that I would tell it to this or any other society, but it is true that we do not make the diagnosis unless our attention has been called to the fact that there is a very large number of cases suffering from so-called gastritis or indigestion due to a condition of the small intestines, chronic appendicitis or loose kidney, which are, in fact, suffering from gallstones. The difficulty is that we have simply learned to diagnose gastritis whenever there is a pain in the region of the stomach. I believe that when our attention has been called to this fact, as it has by this paper to-day, we are likely to look for more definite symptoms before making a diagnosis of gastritis, and that in these cases we will investigate further and make a diagnosis of gall bladder trouble. In my own case, I went home and removed the gallstones from the cases which I had previously referred to the internist to treat for gastritis, and I have operated on several hundred of these cases since.

With regard to the paper of Dr. Davis, I would say that every surgeon as he increases his experience increases the number of cholecystectomies, because he differentiates between the cases that will get well after simple cholecystostomy and those in which a secondary operation must be performed, and with our increasing experience we make a very careful and thorough examination of the case after the abdomen is opened. The diagnosis that we can make before the abdomen is opened is only sufficient to indicate that an abdominal operation should be done. But the accurate diagnosis must be made after the abdomen is opened, and the various steps which Dr. Murphy has described must be followed. The common duct, the cystic duct and the gall bladder should be carefully examined. If the cystic duct is obstructed either from the presence of stone or of cicatricial tissue, and the patient's condition is sufficiently good, then our experience teaches us that the gall bladder should be excised. I believe it is better for the patient and the surgeon to make a cholecystostomy at the time of the primary operation in patients with little strength, because he will recover, and will be comparatively normal until later, when it is safe to make a secondary cholecystectomy. I agree fully with all that Dr. Davis has said in regard to gall bladder surgery.

Dr. William D. Hamilton, Columbus, Ohio—About two years ago, while in England, I went to Leeds and saw work, especially choledochotomies, done by A. W. Mayo Robson, whose great skill in the surgery of the upper abdomen can not be disputed, he having done with an amazingly small mortality about one thousand operations in this region. I should have been very grateful had any of the essayists this afternoon thrown further light on how to do these things.

Any man who undertakes operations in the gall bladder region must be prepared to incise the gall bladder or cystic or comon duct or duodenum, if required, for clearing any portion of the biliary passages.

I got from Dr. Robson the idea that it is only when the gall bladder is pathologically spoiled, so that it can no longer with safety be retained or used for drainage, that he removes it. A pad is put under the patient's back, 18x6x3½ inches, and under the liver line. The effect is to raise the spine, liver and bile ducts, bringing them nearer to the surface. The right rectus muscle is split in its middle from the level of the gall bladder upward, instead of downward, as was formerly done, and I want to emphasize this point. If necessary, he carries the incision clear up to the interval between the ensiform cartilage and right costal margin as far as possible. This exposes freely the upper surface of the liver. The liver can then be drawn downward and forward with the gall bladder in one hand of the assistant, while his left hand retracts the edge of the incision, and contiguous organs, thus displaying the cystic and common ducts from the top of the gall bladder to the duodenum in a straight line, provided adhesions have been already freed. One can thus easily open the common bile duct, clear it and stitch it without needle forceps, a method which I have successfully used.

Dr. B. B. Davis, Omaha—The question that has been dwelt on considerably in the discussion seems to be the danger of doing a cholecystectomy, when we must jeopardize the life of our patient in doing so. I attempted in my paper to throw out this suggestion, that if the condition of the patient were such, or the surrounding conditions such as to make the removal of the gall bladder not an ideal operation, or to render it dangerous, then I would at first resort to the correction of the trouble, and later I would do a more radical operation, if necessary. I feel that this is very important. There are many cases which come to operation which are absolutely unable to bear a severe procedure. In regard to the point made by the last gentlemen, I do feel that if all the cases of gallstones were operated on very early it would give rise to a complete cure in every case, and cholecystectomy would probably answer the purpose, but in my experience it seems to me that at least nine-tenths of the cases have been complicated. I have had a great many where there was obstruction of the cystic duct. I have found stone in the cystic duct. I have found a great mass of adhesions. I have found a very greatly contracted gall bladder; frequently with very thick and friable walls, absolutely useless and detrimental to the recovery of the patient. It seems to me in these cases that it is absolutely necessary to have the bladder removed, in order that the patient may get well. Fortunately in these cases the gall bladder is completely shut off from biliary circulation. Of course, in these cases the only method is the removal of the gall bladder. To my mind the cases which will not demand cholecystectomy are the simple early cases, and the cases which really need cholecystectomy in order to make a complete cure are those complicated cases which we hope in the future will not be so common as they have been in the past.

Dr. F. A. Dunsmoor, Minneapolis—No man should attempt to do an exploratory operation on the gall bladder unless he is thoroughly competent to do any operation that he may find the condition demands when he opens the abdomen. If he is not able to do this, he should not explore, but should let somebody else do so who is qualified to meet the many emergencies of gall bladder work. I wish to say in regard to the gall bladder's mistaken function, that it is not always the place where the gallstones are formed. I have found plenty of gallstones that were not in the gall bladder. I don't mean in the cystic duct, nor in the common duct, but in the substance of the liver. I recall two cases in which there were numerous gallstones scattered throughout the substance of the liver, one associated with hepatic abscess, both with icterus.

Cod-Liver Oil or Saw Wood.—The *New Idea* suggests that when the physician thinks a patient needs cod-liver oil he should pause and consider as follows: If this patient's stomach is strong enough to digest the ordinary cod-liver oils and emulsions that are put on the market, it is not medicine he needs, it is simply work. He is able to saw wood.

OBSERVATIONS ON BREAST FEEDING FROM AN OBSTETRICIAN'S POINT OF VIEW.

WITH REPORT OF CASES.*

EFFA V. DAVIS, M.D.
CHICAGO.

It is with some trepidation that the author appears before a company of pediatricians to present views on the subject of infant feeding; but in the practice of obstetrics, if one is conscientious and consistent, the care of both mother and child calls out the study of infant feeding from the first day of birth, or even earlier, and is so much a part of one's practice that there must be, perforce, a great common source of sympathy and interest between the obstetrician and the pediatrician.

By far the greatest number of infants born are attended, not by specialists, but by the family physician, who, too often, does not even look at the infant when the daily or occasional postpartum call is made on the mother, but relegates the helpless little mite to the care of the nurse or elderly relative. By such means many interesting things pertaining to the child's early days of life are overlooked.

The feeling to which Dr. Rotch of Boston recently referred, namely, that the care of infants and children is a minor part of the practice of medicine and that the youngest and least experienced physician in the community will do for the baby, is too often present. But when one stops to contemplate that one-tenth of all children born do not live a month, it would seem as if the early care of the infant should appeal sharply to all.

An obstetrician, under the usual conditions, has the welfare of two patients to consider during the nine months of pregnancy and the six weeks of convalescence. Many problems are presented to him, if he is observant, by the smaller of his patients. And it is with a desire to receive light and assistance that some of these observations are presented to you.

Before birth the interests of both mother and child are so interdependent that the obstetrician must of necessity be somewhat more of a pediatrician than you may fancy. The safe delivery of the living fetus does not represent all that the obstetrician is responsible for. Much of his study of pregnancy relates to the child's welfare as well as the mother's, and in the labor through which the infant must pass it should claim its proper share of consideration. After birth its very helplessness should plead eloquently to the physician for careful attention. While watchful of complications in the mother, such as hemorrhage, eclampsia, heart failure, etc., the infant should not be forgotten. My first precaution in regard to infant feeding begins before the cord is severed. For the past five years I have allowed, if possible, the pulsations in the umbilical cord to cease naturally before clamping and cutting, giving the infant a good opportunity to establish respiration and to attain in the interval all the placental blood possible. This interval frequently lasts fifteen minutes or longer. The time is occupied in carefully cleaning the infant's eyes and closely watching the contractions of the maternal uterus. Delayed cutting of the cord seems to be a more normal method than its prompt separation; the infants, on the whole, treated in this manner show a more tranquil condition, sleep better and show less hunger during the first three days, and almost uniformly show no loss of weight when weighed at the end of the first week, and often show a gain. I do not notice icterus neonatorum more often than when I practiced prompt cutting of the cord years ago, as some text-books suggest.

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* Read at the Fift[illegible] of the American Medical Association, in [illegible] of Children, and approved for publicatio[illegible] Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

The application of the child to the breast is a matter which I personally attend to, usually before I leave the bedside, one or two hours postpartum. If the labor has been very painful, and the patient much exhausted, a longer period of rest is permitted. Both mother and infant profit by the gradual but regular application of the child to the breast from the first day postpartum. An interval of six hours on the first day, four hours on the second, three hours on the third and every two hours thereafter, night feedings to occur at 10 p. m., 1 a. m. and 5 a. m. for the first six weeks. This gradual demand on the glands has the effect of quietly establishing their function and preparing the nipples without producing erosions and great tenderness.

The mammary glands of the mother are supported and lightly compressed by a breast binder applied on the evening of the second day postpartum. If this binder is applied properly and adjusted after each nursing no extreme turgescence will appear to annoy the mother. I employ preferably a strip of canton flannel wide enough to reach from the arm pits well below the mammæ. It is pinned from below upward, the glands being held upward and toward the median line of the body. Straps are pinned over the shoulders to keep it in place, and a layer of cotton applied under it to equalize the pressure. Where the assistance of a trained nurse can not be had, I have an opening cut over the nipples the size of a silver dollar, to permit nursing without removing the binder, and adjust it each day myself. It has been for me a most simple and effective device, preventing painful so-called caking and the necessity of bruising the glands with breast pumps. It permits at the same time a natural and proper secretion of milk. Massage or handling of the breast is not permitted except when the establishment of the gland function seems to be tardy.

Occasionally we have to deal with a mother who does not wish to nurse her infant, because of its being illegitimate or for some other foolish reason. I am happy to bear testimony that these are rare exceptions in my practice, but when a patient starts out with the determination not to nurse her child, it seems to make a difference in the mammary secretion, and although the child may be put to the breast regularly, it often loses or remains stationary in weight and is restless and fretful. By employing a good deal of sternness and mental suasion these cases are made to take a better view of the situation and the milk supply is improved as determined by the improvement of the infant.

Another class of cases present themselves on rare occasions and are less satisfactorily handled. An occasional infant will refuse to thrive during the first week of life, when the mother seems to have the usual supply of milk and the usual solicitude in regard to nursing her child. These infants are fretful after the third or fourth day, more or less sleepless and do not gain, but show a greater initial loss of weight than normal. The stools show faulty digestion and become frequent and watery, finally green and diarrheal in character. Crying is almost constant and excoriations and irritations about the anus with mild eczematous eruptions are noticed, due probably to the acid intestinal indigestion. Vomiting is not always but occasionally an early symptom and curds invariably show in the stools.

These symptoms are more or less severe, and as long as the child is breast fed continue to appear till it becomes emaciated and more ill and unpromising in appearance each day. Sometimes there is a slight gain in weight of two or three ounces each week, but more often the child's weight remains stationary or goes down the scale.

An analysis of the breast milk in these cases often does not solve the question, as its proportions do not seem to be outside the limits of a normal variation. The expense and difficulty of obtaining accurate analysis of breast milk is so formidable an obstacle in the study of these cases that I have not been able to give it any great attention. One or two analyses have been made in most of the cases I shall report, but not sufficient work along that line has been attempted to prove any of the theories advanced.

These cases are most perplexing to the obstetrician, as the wailing infant retards the convalescence of the mother, and her anxiety as to its welfare may alter the quality of her milk, which under the best conditions does not seem to agree with her child.

What shall be done? If the percentage of proteids is found to be too high, as the appearance of curds and colic would indicate, we can not prescribe outdoor exercise, as can be done later in the puerperium. Even massage as a passive exercise to possibly decrease the curds is not practicable as early as the first week, and massage under any condition is only a luxury for the rich. Meat is usually restricted largely during the first two weeks of convalescence, and it can not enter into the production of too high a per cent. of proteids. The excessive fats, which may produce vomiting, can perhaps be reduced by frequent application of the child to the breast; but too frequent nursing also raises the percentage of proteids, we are told, and the long interval reduces the quantity of milk. At any rate, in my experience, these infants seem to be affected in no way by anything we can do toward modifying the mother's milk. They seem to have an idiosyncrasy or an incompatibility for the breast milk. When placed on an artificial diet, after a few doses of calomel to cleanse the alimentary tract, they will almost immediately improve, sleep will become tranquil, appetite and bowels become normal and skin begin to clear up. I usually use malted milk for this test. When the child is returned to the breast, all the old troublesome symptoms return. Knowing the advantages of breast feeding over the bottle, I always hesitate long before taking an infant from its mother's milk; but it seems to be equally true that while some infants can not be made to thrive on artificial food, there are others that can not be made to thrive on their mother's milk. And yet the percentages of the known ingredients of both the mother's milk and the artificial diet, from an analyst's point of view, are within what we are taught to recognize as normal limits.

The question presents itself, is it the fault of the food or of the infant's digestive power in these instances? Often the same mother has been able to nurse a previous child successfully, and that leads one to hesitate longer in advising an artificial food.

The recitation of the following cases will illustrate. All except Case 4 are from my private practice and in families where trained nurses and intelligent co-operation from the mother could be had.

Case 1.—Infant girl born of Hebrew parents, November, 1898. Father subject to an occasional attack of rheumatism and eczema; otherwise healthy. Mother a healthy young woman, second para. First child born dead three years previously, after some obstetrical operation at time of delivery. Sepsis followed, but mother made a good recovery. Maternal grandmother afflicted with diabetes.

The case was under my care from the third month of the pregnancy, which was normal, as well as the labor and puerperium. The mother was anxious to nurse her infant, and it was applied to the breast in the usual way. The child weighed 7½ pounds at birth and seemed healthy and well. After the fourth day it became restless and fretful, cried much of the time and did not gain in weight. Stools became frequent, watery and green in color, with many curds. Small doses of calomel were administered, with only temporary relief. The breast milk was diluted by giving distilled water from a bottle at each feeding. The diet of the mother, as well as her bowels, were carefully regulated. Analysis was made of the breast milk at the end of the twelfth day, and only a slight increase in the percentage of proteids was determined. Thinking this might be remedied when the mother came to take more physical exercise, the child was still given the breast. But the symptoms grew worse and worse, the anal region showed great irritation and patches of a mild eczema began to appear on the forehead and cheeks. The gain in weight was very slight, if at all, from week to week, and the abdomen became distended with gas, attacks of colic were frequent, and all the relatives became anxious over the case. The mother was obedient and careful in following my directions. She began to take walks in the open air at the end of six weeks, but with no apparent effect on the child's digestion. Malted milk was tried as a substitute to relieve the symptoms and to tide the case along till we were satisfied that it could not digest the mother's milk. When given for 24 hours the crying ceased, the child slept and the stools began to improve. A return to the breast milk would bring back all the distressing symptoms. After working over the case for three months, we all became convinced of the necessity of artificial feeding, even including the mother, who had been firm in her resolve to nurse the child up to that time. An artificial food was adopted of malted milk and cream and the child began to thrive at once, and continued to do so as long as it was under my observation. For a short time, I might add, we tried modified cow's milk from the Walker Gordon laboratory, but this did not seem to be digested as well and the malted milk and cream was resumed, as it gave such good results.

CASE 2.—Girl born Dec 27, 1900. Father German American, well and healthy. Mother German American, nervous type, subject to severe attacks of dysmenorrhea. First came under my care for uterine polypus three months before becoming pregnant, had been thin and ailing for three years, and after removal of the growth and treatment for cervical erosions, she became pregnant for the first time and passed through her nine months of waiting in good condition, except for slight facial eczema occasionally noticeable in the last two months. Labor and the puerperium were normal.

Infant weighed about 7 pounds at birth and appeared healthy. It was exclusively breast fed for six weeks, but gave the nurse great anxiety by frequent fits of crying, sleeplessness and but slight, if any, gain in weight. Many simple remedies were tried to correct the apparent indigestion, without effect. Crying became almost incessant and the infant slept only from exhaustion. I was often called in the middle of the night to suggest something for the attacks of pain which seemed to assail it. The mother possessed more than the usual amount of knowledge of physiology and chemistry and was helpful and trustworthy in carrying out instructions.

At the end of six weeks, after analysis of the breast milk, which showed the normal average percentages, a trial of artificial food was made. A preparation of malted milk was given for 48 hours, and the symptoms subsided. The mother's milk being drawn in the meantime, nursing at the breast was resumed on the third day. An attack of colic began one half hour after the breast milk was given and lasted for some hours. The mother tried for a time to partly nurse and partly feed the child, but always with the same violent attacks of crying after each breast feeding, and general signs of indigestion. After using malted milk as a substitute for two weeks, modified cow's milk was used instead with good results and no breast milk was given after the third month. The growth and health of the child was all that could be desired after that and she presents a perfectly normal appearance now at two and one-half years, development having been quite natural in all respects.

CASE 3.—Boy, born September, 1902. Father well and healthy. Mother American, primipara, aged 35. Subject to eczema of the hands. History of uterine displacement and dysmenorrhea. Came under my care at the seventh month of pregnancy. Head of fetus carried low in the pelvis, pregnancy history otherwise normal. Uterine inertia and forceps extraction. Child weighed 9 pounds at birth, face unsymmetrically developed, caused, no doubt, by the crowded position during the last two months of pregnancy of the head in the bony inlet of the upper half of the birth canal. This position was probably brought about by the wide pelvic inlet, the imperfect development of the uterus, due to adhesions, and the tight clothing of the mother during her early months of pregnancy.

The infant began to cry in the first week, and was unwilling to take the breast readily for two weeks. Its stools were white and curdy, sometimes green, and there was loss of weight. Mother's milk was abundant, but she was rendered nervous over the apparent illness of the child. The milk was not analyzed, but as the child had lost one half pound at the end of one month, he was put on the breast milk of a healthy wet nurse, whose own child of one month was gaining at the rate of 12 ounces each week. The first week there was some improvement. The child had gained one half pound, but had been given malted milk every other feeding, as the wet nurse still nursed her own infant. After that time, modified cow's milk was given alternately with the breast milk feedings and no gain in weight resulted. The child slept better and cried less, but the stools remained abnormal and he vomited often. At the end of the second month his weight was just 9 pounds, the same as at birth, and he looked emaciated, with pasty color to the skin, eruption about the anus, and marasmus well established. As the wet nurse was an expensive luxury, we gave up the breast feeding entirely and tried fresh cow's milk, first modifying carefully and moving the percentages of fats, *proteids, sugar, etc., up and down the scale without success.* The child looked starved and ill. Thinking a malt addition to the milk might improve digestion, malted milk was again tried. The child showed slight improvement, but did not gain in weight. He still vomited and passed whitish, pasty but odorless stools. When 2½ months old, one of the malted foods (Wyeths) was added in small quantities to the modified cow's milk formula, and a decided change took place in the character of the stools. There was cessation of vomiting, hunger was satisfied, and at the end of one week the child gained one half pound.

The experiment was tried several times of substituting the simple modified cow's milk formula, a modification with Mellin's food and with diastase, but the weight became stationary as soon as the malted food was taken out of the formula. One teaspoonful only was added to each feeding, but later this was increased to two. The gain was constant after using this agent, and at 5½ months the child weighed 15 pounds and was bright and healthy in appearance.

CASE 4.—Boy, born Oct 19, 1902. Father rheumatic, otherwise well. Paternal grandmother suffers with a heart lesion. Mother young American, third para. Suffered with dysmenorrhea before childbirth, otherwise healthy. Her first infant was breast fed and fairly well nourished, but died at 9 months of pneumonia. Second child weighed 6½ pounds at birth, also breast fed and well nourished. Weight 17 pounds at six months and 21 pounds at one year. Digestion seemed perfect, with the exception of occasional attacks of colic the first three months.

The third child is the case to be described. Weight at birth 7¾ pounds. Breast fed for three months. Poor digestion, with colic. Stools loose, irregular, green and curdy. Vomit ing, restlessness and fretful temper. Slight gain in weight. The attending physician, owing to these symptoms, made two breast milk analyses and reported the milk rich in fats and proteids. He advised the mother to continue breast feedings. This she did, but the child cried so much and evidently seemed to be so poorly nourished, that some artificial feeding was attempted without the physician's advice. Condensed milk was used, three extra feedings being given during 24 hours. The child began to improve in temper and gained in weight more rapidly. Hunger was appeased and vomiting nearly ceased.

March 2 I was called because of return of vomiting and fretfulness. I found the infant, then about four months old, with pasty colored skin, curdy, clay colored stools, vomiting frequently, colicky and hungry. The use of condensed milk was stopped and modified fresh cow's milk was substituted, which a trained nursery maid prepared, the mother being allowed to nurse the child but twice daily. Improvement began at once. In about ten days I was called again to find the child in a high fever, with symptoms of bronchitis; stools showed poor digestion. The alimentary canal was swept clean with castor oil and calomel, arrowroot water given for 24 hours, and the temperature and bronchial symptoms subsided.

It was then gradually put back on the breast milk and modified cow's milk, the breast being given every other feeding for 35 hours.

The child did not seem satisfied, and would not empty the breast, though apparently hungry, and the milk in the glands seemed to be abundant. When given the bottle he drained it to the last drop and was satisfied. After a test of three days, with no improvement, artificial food was given entirely, with a subsequent gain of ten ounces in one week. Stools appeared yellow and well digested, and happy temper and normal sleep returned.

Case 5.—Girl, born August, 1900, of young Italian parents, Father well and healthy. Mother primipara, normal labor, pregnancy and puerperium. Infant breast fed, weight 7½ pounds at birth. It became colicky with abnormal stools soon after birth, and although it gained slowly in weight, became distinctly rickety at the end of nine months.

A breast-milk analysis showed a low fat and a high proteid percentage. A troublesome galactorrhea was present throughout lactation. The patient had been drinking beer as a tonic before and after delivery. I tried the effect of outdoor exercise and no fluids except milk and cocoa, with no results. The infant did not appear well till artificial feeding was begun at nine months. After a course of codliver oil and cow's milk the signs of rickets disappeared and the child gradually began to appear normal in strength and development.

I have since delivered the mother of a second child, a girl weighing 6 pounds, June 24 1902.

It has been successfully breast fed, and at four months was normal in growth and habits.

Case 6.—A girl, born November, 1902, came under my notice in the nursery of the Chicago Maternity Hospital, where it had been placed by the mother, who had taken a position as a wet nurse. No family history was obtained. The child, while well and thriving, was taken abruptly off its mother's milk and placed in some private home, where it was fed on Mellin's food. At the end of two weeks its condition was so alarming that it was brought to the nursery in what seemed to the nurse to be an almost dying condition. The face was pinched and extremities cold, and the chin dropped. The temperature per rectum showed fever. Stools were abnormal. The child was placed in an incubator and under the care of a special nurse and careful feeding the spark of life was rekindled. With the assistance of one or two daily feedings from its mother's milk it was made to gain slightly in weight, the body heat sustained to a better degree, and a hopeful view taken of the case. At the end of a month the mother ceased her one daily feeding from the breast for a few weeks and the artificial feedings were alone given. The gain in weight ceased and then a loss of weight ensued, with vomiting and cold extremities. After two months or more of experiment, the mother decided to return to her child, as its feeble state alarmed her and she entered the hospital to nurse it. From the first day the vomiting ceased, and whereas before we were unable to give the proteids in any form except whey and pasteurized cream, without excessive vomiting, the child now took its mother's milk with no ill effects and began a prompt and uneventful recovery, being discharged with its mother, quite well and thriving in two weeks.

This is a type often seen, and yet beside this infant were many others in this nursery who had been just as abruptly taken from their natural food and were thriving vigorously on artificial formulæ.

SUMMARY.

In the first five cases all of the infants presented signs of indigestion in the first week of life.

Four have a family history, either of rheumatism or eczema, and two of both.

All of the first five infants recovered promptly on artificial diet containing cow's milk modified, and all but one (Case 2) did better when some malted preparation was used.

All of the mothers desired to nurse their babies, and two had successfully done so in the case of other children.

CONCLUSIONS.

It is often solely the idiosyncrasy of the child, not always the quantity or quality of the breast milk, which prevents successful breast feeding.

The idiosyncrasy may be along the line of a dyscrasia inherited from parents, subject to what is known as the uric acid diathesis.

It is not fair to the infant to allow it to remain sick and in distress because of a paltry ounce or two which it manages to gain in the course of a week, just to have it breast fed.

A careful study of the child should be made in all cases when the signs of indigestion appear shortly after birth. And when possible a milk analysis should be performed many times to clear away, if may be, some of the doubts which arise.

In large cities, where municipal laboratories exist, the assistance of an expert chemist in the study of human breast milk would be of infinite value to the profession, desiring to lessen this one-tenth death rate of infants during their first month of life, and to the busy obstetrician who has no opportunity of becoming an analytical chemist.

100 State Street.

APHTHÆ AND HERPES.

CONTRACTED BY CHILDREN DRINKING MILK FROM COWS SUFFERING FROM FOOT AND MOUTH DISEASE.*

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At Frankfort-on-the-Main, in 1884, foot and mouth disease was prevailing among the entire herd of a model dairy farm. After the disease had subsided an investigator named Cnyrim, with an apparent endeavor to put the model dairy in a good business position again before the public, formulated three questions, which he had printed and sent to one hundred physicians in Frankfort and the neighborhood. From these he received fifty-three answers, out of these fifty-three answers only twelve reported suspicious cases, but eight of these twelve did not get their milk from the model dairy. So it appears from the findings of Cnyrim there were only four mild cases that could possibly be attributed to the milk from the Anstadt, and so Cnyrim jubilantly exclaims at the end of his bill of health to the customers of the model dairy farm: "The final conclusion indubitably indicates that the outbreak of foot and mouth disease brought no danger to the consumers who remained loyal to the institution."

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The foregoing allusion to Cnyrim and his model dairy farm I have given to indicate one of the conditions that make it difficult for the book student to associate bovine foot and mouth disease with human herpes and aphthæ. If we look at the matter from a dairyman's point of view, it will readily be seen why there are so many Cnyrims keeping us off the main track. Foot and mouth disease in a cow lasts only from ten to twenty-one days; fatality from the disease in some seasons is of great rarity, and at the worst the mortality ranges only from 1 to 5 per cent.; after the disease subsides dairy herds very often resume their ordinary flow of milk and normal degree of health. In a milking herd unmolested by health authorities the dairyman will lose for about a month from one-third to two-thirds of his income from milk, and he continues his business with only this loss after the disease has abated. Under the present conditions established by the Federal Bureau of Animal Industry, a dairyman having the disease in his herd has his stables at once quarantined, his entire income stopped. His cattle are appraised at a fair valuation and he receives 70 per cent. of this appraisal, all his animals are killed, the stables thoroughly cleaned and no animals are allowed in them for two weeks or more, and then only two animals for a time as a test. Thus it can readily be seen that a dairyman whose herd is afflicted with foot and mouth disease has his business entirely destroyed, and if he ever resumes it is necessary to start almost from the beginning. I have always maintained, and still adhere to my view, that none of those who conduct such a large and laborious business as the milkman with from twenty-five to one hundred cows is so poorly paid for his labor and his investment as the farmer who carries on a milk business. That he does his business carelessly, I know, that he will send to a community milk that he knows will do harm, he will not often, I think, deny, and so, when he himself can mislead the health authorities he will do so, and when he can not do so himself, he will, if possible, hire a Cnyrim.

While studying the literature of foot and mouth disease from the meager human medicine point of view, and learning that the disease was prevailing in some of the New England states, I wrote to Dr. Salmon, chief of the Bureau of Animal Industry at Washington, asking him where I could find some cases of human aphthæ acquired from the milk of animals with foot and mouth disease. He replied that he did not think I could find any such cases, but if I would go to Concord, Mass., I would be certain to find numerous farms from which cows had been removed that were affected with this disease. I went to Concord, and found that 327 cattle had been killed in that community because they had foot and mouth disease. I made the acquaintance of Dr. E. D. Harris, a veterinarian who was the inspector of animals and provisions for that town. He accompanied me to several of the farms where the animals had been killed. Among all these farmers only one peddled milk in the village of Concord, and his was the first herd to contract the disease. Among his customers there were, so far as I could discover, four who were affected by the milk, an old gentleman and his wife with slight fever and nausea, the son, a young man, with a mild aphthæ and herpetic eruption, and, in another family, a middle-aged woman with a very sore mouth with the characteristic vesicular eruption of aphthæ. The dairyman who had supplied these people with milk assured me that only the milk of one sick cow mixed with the milk of forty odd others not affected had been served. Learning that a family named J. in Concord, whose herd had been killed, asserted that their children had been fed on the milk of the diseased cows, I called on them in company with the veterinarian. They were naturally very much perturbed and angry, their business having been entirely destroyed. When I first saw the father and mother and talked with them in the presence of the veterinarian they affirmed very earnestly that they had fed raw fresh milk from the diseased herd to two healthy little girls, about 5 and 7 years old, and a robust boy about 11, whom I saw playing about the place. But when I got the mother aside and questioned her seriously she confided to me that there was one cow that was not very sick and had recovered before the others were badly taken, and when the disease was rife in the herd what milk the children got was from this well cow after it had been boiled. "But," she added, "there is a family named C. up the road who fed their children on the milk all through the disease and made butter from it until the animals were killed." The veterinarian took me up to C.'s farm; they were a thrifty, not over clean, Scandinavian family, father, mother and six children. They did not let us into the house; the father and mother came outside and talked with us; they were very angry at the veterinarian and thoroughly incensed against the federal authorities. We could not help pitying them; a hard-working couple who had been years in getting together a herd of cattle and having them all taken away and their entire occupation gone. On questioning them the mother insisted in a most serious and solemn manner that all the six children, from a boy of 12 to a baby less than a year, had consumed all the milk they desired from the sick cows. I only saw one of the children at this interview, a boy of about 7, and he looked thin and anemic, and I felt pretty sure that this boy had been sick. The next day I visited the family alone. I walked right into the kitchen where the mother and six children were congregated. Getting the mother into a confidential mood, she told me that the first cow that was taken sick in their herd sickened about her calving time, and was sick only for four or five days, recovering perfectly before the rest of the herd were much affected. The mother said she had fed this cow with saltpeter and corn meal for a couple of days to clean her out, and it was the milk from this cow, boiled, that the children got. I asked her if she would dare to feed her baby on the milk of one of the sick cows; she threw up her hands and exclaimed, "Oh, no, no! I have seen a calf suck a sick mother and drop dead." But she added, "I am mad with the men that killed our cows; they were all well again when they were killed and the milk was just as good as it ever was."

Failing to discover any children affected by the disease in Concord, I learned that there was a dairyman in Lincoln who made a specialty of babies' milk which he sent to Boston. I found him at home, his entire herd of cows had been killed, he was not at all disturbed, seemingly taking a philosophical view of matters, and was only waiting until the time had expired when he could resume operations with a new herd. He said that just as soon as the disease broke out in his herd he continued to ship his milk to Boston, but sent a printed circular to all his customers that his cattle were afflicted with foot and mouth disease and that he advised them to boil the milk. He stated positively that during the sickness of his herd he used the milk in his family and allowed his daughter to drink it fresh and raw with no bad results. I asked him if he could give me a list of his customers in Boston, but he refused. I asked him then for the name of a physician who knew some of his patrons and recommended his milk, and he did so cheerfully enough. I wrote to the physician, inquiring if there were any cases of aphthæ associated with milk from this dairy, and I received from the physician a very kind and courteous letter, from which I quote the following: "As for foot and mouth disease, I have never seen but one doubtful case, and in this case the mother stated the infant had not been fed on milk."

From the American standpoint, for the past thirty years aphthæ and herpes contracted from cows suffering from the same affection is absolutely *non est,* as there has been no bovine foot and mouth disease in this country until the epidemic that appeared this winter in New England. But during all this time there have been very many cases of stomatitis aphthosa, or the same disease under one or other of its many synonyms that have not been contracted from foot and mouth disease in cattle. Forchheimer, in his book on "Diseases of the Mouth in Children," is perfectly right when he doubts the relationship between foot and mouth disease and stomatitis aphthosa in children as he saw it, because in his time there has been no such disease among our dairy cattle. Nevertheless, there is an aphthous condition and an herpetic affection that is caused by drinking milk from cows suffering from the so-called foot and mouth disease, an affection characterized by an aphthous eruption in the buccal cavity of the bovine animal and an herpetic eruption on the less hairy portions of the animal's skin. The disease in the dairy animal is often mild and not characteristically fatal. The acquired disease in the child, depending on the freshness of the milk and the amount ingested, can be either a mild or a fatal malady. In 1883 R. Demme, in the *Vienna Medical Journal,* Vol. vi, reports in the Canton of Lucerne a case of twins fed on goat's milk, the goat having foot and mouth disease. The milk was fed fresh and raw. The stronger of the children, a boy, had a very severe aphthous condition of the entire mouth and throat, and died after seven days' illness; the other, a girl, was also sick with aphthous sore mouth, but recovered after five days.

Dr. M. K. Robinson reports, in the London *Practitioner* for 1884, a severe epidemic of aphthæ acquired from hoof and mouth disease in Devonshire. Two hundred and five persons were affected in one week, two children died, the aphthous affection having extended to the respiratory tract in the children.

J. C. Gooding reports, in the *Medical Times and Gazette* of London, in 1872, that a mother who drank milk from a herd affected by foot and mouth disease, acquired an aphthous affection of the mouth, and, as she was nursing an eight-month-old infant, the child also was infected with aphthæ from its mother's milk. The same author reports the case of an infant twelve months old that was infected from the same cow's milk, but recovered promptly when the milk was stopped. Three older children were also affected by the cow's milk, but recovered promptly when it was discontinued.

Friedberger and Frohner, in their text-book of the "Pathology and Therapeutics of Domestic Animals," write (the English edition, p. 610): "The use of milk from aphthous cows contaminates children quite frequently and is fatal to them."

Professor Brown, head of the Veterinary Department of the British government, says: "Milk from cows infected with foot and mouth disease acts energetically on young animals when it is given warm; calves die quite suddenly after sucking cows affected with the malady, and fatal effects have followed the administration of the milk to guinea-pigs." So the head of the Veterinary Department in England, looking entirely to the interests of the cattlemen, has warned the breeder of the danger to young animals, but carrying out the Cnyrim idea he makes the following statement in the London *Lancet* (Vol. ii, 1869): "It has been alleged that there is not any direct evidence of injurious consequences arising from the consumption of milk from cows (affected with foot and mouth disease) on human subjects." The author accounts for this by assuming that in consequence of the marked decrease in the flow of milk from animals affected the milk would be very much diluted to make up for the loss.

Failing to find any cases of aphthæ in children at Concord, I proceeded to Lawrence, Mass., and there made the acquaintance of Dr. J. F. Winchester, president of the American Veterinary Association, who told me that there were two families in town who had been afflicted with aphthæ from drinking milk from cows affected with foot and mouth disease. One of these families were patients of Dr. McAllister. I called on him and he kindly took me to the house to get the story from the mother herself.

Mrs. S, mother of five children, aged 1, 3, 5, 8 and 10 respectively, in December last was taking three quarts of milk from a milkman named G., who produced his own milk on a farm near Lawrence. The baby was bottle-fed on condense milk, but was given one feeding a day of fresh milk; the thre year-old child lived almost entirely on fresh milk; the othe children had milk on their oatmeal and in their coffee, but di not have any to drink. On December 13 the three-year-ol child became very sick, feverish, vomiting and some diarrhe tongue very much swollen and covered with blisters, lips cov ered with blisters. After the child had been sick for fou days it began to have severe convulsions, several of them daily On December 19 the mother noticed in one of the local paper that the cows of the milkman G. had been condemned by th animal bureau for foot and mouth disease. She spoke to th doctor about it and he advised her to stop the milk. She di so, and all the children recovered in a few days, the other four children having all had sore mouths without being very sick. The mother thought that the three-year-old child, if the milk had been continued much longer, would surely have died, as he was very sick and the convulsions were severe.

I was not able to see the other family, but have written to the family physician, who as yet has not answered me. The milkman G., who served the first-named family, had 35 cows killed, so he must have distributed in Lawrence 200 to 300 quarts of milk, so here we have in this family five children consuming only three quarts of it, and every one of them affected, and it is very natural therefore to suppose that there were many other cases so affected in the city of Lawrence. It is easy to see how these five cases could have been missed had not the mother noticed the name of the milkman in the paper. The family physician did not associate the disease with the milk. Why should he? He undoubtedly had seen many cases of aphthæ and stomatitis during the past thirty years when there had been no foot and mouth disease in the country.

There is an aphthous condition of the young in both the bovine and human families that is non-contagious, and there is also an aphthous condition in both these species that is contagious, and the similarity between the contagious and the non-contagious in both families is so marked, clinically, that it is very difficult to separate them: in neither of the families and in neither the contagious nor non-contagious affection has, up to the present time, any pathogenic organism been discovered, and in the contagious affection, contrary to the general rule, one attack does not give immunity. Therefore, the only way to diagnose in the human young a stomatitis aphthosa acquired from the bovine race would be from a knowledge that the milk comes from an infected herd. All the literature points straight to one fact, namely, no matter how severe the affection may be, if it is caused by the milk it subsides very quickly without further treatment by simply stopping the milk. So it follows that the simplest way to diagnose between contagious and non-contagious stomatitis aphthosa in the milk-fed young is to stop the milk. Then, if the milk was the cause, the diagnosis is made and the affection cured

LITERATURE.

SAGAR, M Libellus de aphthis pecorinis (Vienna, 1765, 8vo)

BROSCHE (Dresden, 1820): Reports two cases of milkmaids who had milked cows affected with foot and mouth disease, and contracted herpes on the fingers and toes.

MEDICINISCHE VEREINSZEITUNG (1834, No 48, p 226): Professor Horzburg of Berlin drank a quart of fresh milk daily from a cow with foot and mouth disease On the second day he experienced slight fever, contraction of the limbs, headache, heat and dryness of the mouth, and an itching sensation in the hands and fingers Five days later the mucous membrane of the mouth and tongue became perceptibly swollen and small vesicles appeared These vesicles increased in size for a few days, and at last burst, leaving in their place dark aphthous patches which did not disappear for a considerable length of time On the hands and fingers vesicles also appeared, and afterward burst and dried up in the same manner.

MAGAZIN FUR THIERH. (1840, vol ii) Hildebrandt in

JOURNAL DE MEDICINE VETERINAIRE (public à l'ecole de Lyons, vol ii, 1846)

EDINBURGH MEDICAL JOURNAL (February, 1863, p 704): J B Histop reports two cases of murrain (aphtha epizootica) in man "In August, 1862, Mrs X, the wife of an extensive farmer, came under my care on account of an eruption of bright red spots one eighth of an inch in diameter, covered with a thin white desquamation which was so thickly sprinkled over her feet, legs, thighs, and the lower part of her body as to leave only minute interspaces of sound skin On a subsequent visit to my patient, I found her husband complaining of a sore mouth and throat On examination, I found the mucous membrane of the lips, mouth, tongue and throat studded with small ulcers, giving off a white slough, which left behind it a clean, but highly sensitive, cup shaped cavity, his forehead was also covered with an eruption similar to that on the lower extremities of his wife The only cause that could be assigned for this peculiar affection was the circumstance that the whole of Mr X's cows were at that time laboring under the vesicular murrain (aphtha epizootica) I subsequently ascertained on inquiry that various other individuals employed about the cattle had suffered from similar eruptions, though in a less degree Several of the children about the house were also affected with sore throats, but the symptoms in their case were mild The family were in the habit of freely using the milk fresh from the cows"

LANCET, vol ii (London, 1869, pp 589-591): An unsigned article, with some microscopic illustrations No human cases cited Also a report of Professor Brown, "Foot and Mouth Disease in Relation to the Milk and Meat Supply"

REPORT OF MASSACHUSETTS BOARD OF HEALTH (vol. iv, p. 426, Boston, 1871): A. H. Nichols Report on the use of milk from cows affected with foot and mouth disease In one family, the members of which partook freely of milk (from a dairy of cows suffering from foot and mouth disease) a peculiar disease broke out in the course of five or six days, carrying at the same time similar and well marked symptoms in no less than three adults. The symptoms consisted of loss of appetite, nausea, slight acceleration of the pulse, swelling of tonsils and submaxillary glands, the appearance of a few vesicles on the lips and tongue and a singular cutaneous eruption on the lower extremities, consisting of clusters of papules, vesicles, pustules and ulcers of different sizes, the latter characterized by a dark red color while their peripheral margin was slightly elevated and inflamed. These appearances in various stages of development were all seen at one and the same time, indicating that a fresh outbreak of vesicles was taking place as rapidly as the old ones disappeared. In each case, the eruption was confined to one limb and attended by great constitutional disturbances and lasting six or seven weeks At the same time, in the same town, Dr. Braman reported a case as follows: "The symptoms here noticed were an efflorescence on both lips which at a distance looked swollen and everted, and on close examination were proved to be studded with minute vesicles and aphthous patches, decided swelling of the mucous membrane of the gums and nasal cavity, pain and tenderness in the region of the abdomen, and diarrhea." Two young rabbits were inoculated with matter from the vesicles on this woman's mouth; at the end of two days the characteristic eruptions took place in the mouths of these rabbits and they were seized with convulsions and died. Next, some of the lymph was introduced into the arm of a healthy man, and at the end of two days vesicles began to form at the points of inoculation, four or five days later vesicles ruptured, leaving unhealthy looking ulcers, which increased in size and had not healed when the article was written

MEDICAL TIMES AND GAZETTE (vol i, London, 1872, p. 91): J C Gooding on "Diseases of the Mouth and Bowels from Using Milk of Cows Affected with Foot and Mouth Disease," reports, "In the autumn, 1819, Mrs. —— was suckling an infant eight months old and was herself drinking about one and a half pints of milk daily. She complained of soreness of the gums and roof of the mouth. Shortly after the infant exhibited disinclination for the breast, crying when pressed to take it On examining the mouth, the gums of the upper incisors were found to be swollen and very tender About this time the husband had sore gums and palate; he had been taking about a pint of milk daily. The milkman acknowledged that his cows had foot and mouth disease; on changing the milk, they all recovered without treatment." He also reports an infant twelve months old, gums hot, swollen and red, roof of mouth deeply congested, feverish, pallid and fretful. Stopped the milk and the child made a prompt recovery. Milk from the same milkman was given to three older children; two hours after ingestion one, three years old, was taken with vomiting and diarrhea, one, seven years old, with vomiting; one, nine years old, was not affected.

REYNAL AND SACC: Sur l'innocuite du lait provenant des vaches atteintes de la fievre aphtheuse ou cocotte (Bull. Soc. nat d'agricult de France, viii, Paris, 1873, 103, 129, 331, 372, 392, 421)

DAMMAN: Milch von mit Maul und Kleuenseuche behaffeten Kuher (Alpwirth Monatsbl, 9, Aarau, 1877; 9 11).

DEMMIL, R, Ueber die Uebertragung der Maul und Klauenseuche durch die Milch (Wien med Bl, 6, 1883, 8-11). Reports the case of twins both fed on the fresh milk of a goat suffering from foot and mouth disease, both sick, one died of the affection

M R ROBINSON Outbreak of epidemic sore throat following the use of milk from cows suffering from aphthous fever. (Practitioner, vol xxxii, pp 467 475, London, 1884). Reports that in Devonshire, in February, 1884, there were 205 persons attacked in one week, the milk all coming from one milkman The symptoms were inflammation of the throat, enlargement of the lymphatics of the neck and vesicular eruption. Two young children died, two persons with chronic kidney trouble died, a servant girl who had been sick for seven days died in coma.

PROUST: Transmission de la fievre aphtheuse a l'homme par injectiono du lait d'animaux malades. (Rev. d'hyg., vol. x, Paris, 1888, p. 576.) Proust quotes Delest and David (1887), who published treatises on the subject, as follows: "Three Germans took milk intentionally from a sick cow. Next day one was taken with fever and burning in the mouth; on the fourth day numerous aphthous vesicles appeared in the buccal cavity; the two others did not present fever, but had the aphthæ." "In 1872 Bircher took a glass of goat's milk; three days afterward three vesicles appeared as large as a pea. These vesicles burst and left little ulcerations. All the goats on the farm where he got the milk had aphthous fever, and the author was assured that many people in the village and the neighborhood presented symptoms of the same nature." Proust himself has seen repeated cases, isolated or simultaneous, that he knew were due to milk from aphthous cows. He also quotes Thorn-Thorn (1869), who visited various districts where aphthous fever was prevailing among the cattle, and questioned both the doctor and the veterinarian. At Bungay (4,000 inhabitants consuming the milk of 150 sick cows) he found one doctor only who had attended five persons who presented vesicles about the mouth and had fever. At Lewes (10,000 inhabitants) no doctors report any sickness. At Hertford (7,000 population) 130 persons took milk from a dairy where the cows were suffering from epizootic aphthæ and none were sick. There were no cases at Ware, Hutchins, Stevnage or Barnard, but at Beccles (population 4,300) two physicians attended more than one hundred persons attacked with pain in the mouth, a vesicular eruption, ulcerations resembling those of mercurial stomatitis, digestive troubles and prostration. All these persons had drunk milk from cows with aphthous fever. At Bexhill, three families from London, a total of thirteen persons attacked simultaneously with ulceration of the lips, gums and tongue, swelling of the tonsils and submaxillary glands. The affection lasted three weeks and was followed by marked weakness. All these persons had consumed liberally milk from sick cows, not boiled and not creamed.

HECKER: Untersuchung zur Bekampf der Maul und Klauenseuche (Thierarzt Woch., Berlin, 1889).

LABAT, A.: L'usage du lait des animaux atteints de la fievre aphtheous est des modes de transmission de cette maladie a l'espece humaine (Rev. Med. de Toulouse, 24, 1890, p. 27, 39, 55, 67).

LOEFFLER AND FROSCH: Bericht der Kommission zur Erfosschung der Maul und Klauenseuche. (1 Abt. 33, 1898).

F. FORSCHHEIMER: The diseases of the mouth in children (p. 38, Philadelphia, 1892).

RENARD: Fievre aphtheuse chez l'enfant; transmission par le lait de vache; traitement. Rev. mens. d. mal. de l'enf., xiii, Paris, 1895; pp. 18 to 22.

SALMON, DR. D. E., U. S. Department of Agriculture: Special Report on the Diseases of Cattle, Washington, D. C., 1896, p. 391. "Human beings may become infected by drinking the unboiled milk from animals suffering with the disease." He cites no cases.

PROCEEDINGS of the Seventh National Veterinary Congress. Baden Baden, 1899. Hecker.

LANGDON FROTHINGHAM, M.D.V.: "Foot and Mouth Disease (Medical and Surgical Journal, vol. cxlviii, pp. 9 to 12, Boston, 1903).

NOTHNAGEL: Spezielle Pathologie.

FRIEDBERGER AND FRÖHNER: Lehrlich der spezielle Pathologie der Hausthiere. "The use of milk from aphthous cows contaminates children quite frequently and is fatal to them."

Pure Carbolic Acid in Erysipelas and Osteomyelitis.—Menciere relates in the *Gaz. Méd. de Paris* two cases of erysipelas treated by application of a compress dipped in a 50 per 1,000 solution of carbolic acid. It was left in place for three or four minutes and then the parts were rinsed with alcohol. American authors have reported the same. In a case of acute osteoarthritis he applied the pure acid liquefied with one-tenth alcohol. The infection was arrested even more effectually than with the usual use of the bistoury and scissors.

PROLONGED WITHDRAWAL OF FOOD IN CERTAIN CASES OF INTESTINAL DISORDER.*

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It may safely be stated, as a general principle, that the less we rely on drugs in the management of any given diseased condition the more do we fall back on accessory management in the way of hygiene, diet, and hydrotherapy. The man who thinks he has found a specific for typhoid fever in his tablets given at prescribed intervals, loses interest in baths. The man who imagines he can digest food in a patient's stomach by means of artificial digestants, places less stress on diet.

So in disorders of the intestinal tract of childhood, when one comes to realize that drugs may not be depended on for cure, he falls back on management by other means.

All authorities agree that diet is the great desideratum in, as well as the great barrier to, the successful management of this class of cases. All authorities recommend that food be withdrawn in the beginning of such disorders, but in no text-book has been encountered a recommendation that the period of withdrawal be prolonged beyond forty-eight hours.

The object of this brief paper is to put on record the clinical observations:

First.—That infants can safely be deprived of all food except water for much longer periods of time than have been advised in our text-books.

Second.—The value of the procedure in the management of severe cases.

Drug treatment and feeding management will not be entered into.

How much longer than forty-eight hours infants might, with impunity, be deprived of food was not known to the writer, nor were data on the subject to be found in the text-books.

It was known that professional fasters had demonstrated the possibility of very prolonged periods of fastings for adults—even to fifty days—and it was recalled that new-born infants manage to survive on the scanty secretion furnished by the mother's breasts for the first two and even three days.

It was recognized that food of any character seemed to act as a poison on some of these cases even after forty-eight hours, and so the period of food withdrawal was lengthened until three years ago this last April a child, 15 months of age, was kept absolutely on plain water, *ad libitum*, for five days and nights, 120 hours. The child was suffering from ileocolitis, ushered in by convulsions, fever and bloody stools. The convulsions occurred at intervals, but with lessening severity, for two days.

It was unknown territory, in one sense, but as the child seemed to maintain her strength and flesh as well as, or better, than other patients given food, and as the conviction was strong that food would only aggravate a desperate case, the course adopted was persisted in for five days, till the reduction of temperature and change in character of stools seemed to warrant the administration of diluted food in the form of broth, followed by whey and then by modified milk.

During the summer of 1902 an infant, ten months old, ill with ileocolitis, was kept for five days on water—baths being employed for the reduction of temperature.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

At the end of these five days the very serious question arose as to whether it would be justifiable to keep an infant of ten months any longer without food. Again unexplored territory had been reached. Egg albumin water was given once only to the amount of three ounces. The symptoms were all aggravated by it within a very few hours, and thereon the resolution was formed, with the consent of an intelligent father, to persist in keeping all food from the child till the symptoms abated or the child was beyond any hope. After three more days—that is, eight days in all—the fever having abated and the stools changed, diluted food was given and the child went on to recovery.

The most surprising observation made was the failure of this little patient to fall away to a skeleton after such prolonged fasting. It is regretted that no weights were taken, but to preconceived ideas it was simply a revelation how the child could retain so much flesh Not that the child did not lose flesh, for it did, but merely that the loss was not commensurate with preconceived notions and was a source of general remark to such parties as saw it and knew the history of the case

During the last four seasons no case of acute intestinal disorder seen during the first week has been lost, save one This was a case of multiple ulcers of the stomach, accompanied by convulsions, persistently high temperature, extreme tympany, no vomiting or diarrhea, and in which the correct diagnosis was made by means of a postmortem examination The favorable outcome of some apparently desperate cases, during these four seasons, has engendered confidence that in the extension of this recognized procedure we have a valuable help.

The prolonged withdrawal of food is not advocated in every case indiscriminately, nor even in the majority of cases. In the vast majority, if seen early, a withdrawal of a few hours until Nature or a laxative empty the intestinal tract of offending material, will be all that is required What is contended for is that each case be individualized—be managed in accord with the indications furnished by tongue, by tympany, by temperature, by stool What is contended for is that these little patients, ill with the severer forms of intestinal disease, will be more comfortable, will live longer, will recover more quickly on water than they will on food of any description that a disturbed intestinal tract can not assimilate.

The text-books tell us to keep them forty-eight hours on water, then to put them on gruels, broths, whey. The contention of this paper is that not time, but the characer of the stools, the condition of the patient, be the limit for a return to food.

INFANT FEEDING—ITS RELATION TO THE DIARRHEAL DISEASES OF INFANCY.*

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The causative relation of diet to diarrheal disease is an important and real one, and is worthy of serious consideration at the hands of practitioners of medicine in general, and pediatrists in particular

Clinical observation of the varied and complex digestive and nutritional disturbances of early life, illuminates their etiologic and pathologic study, and when coupled with a comprehensive view of the physiology of digestion must eventually lead to the general adoption of successful preventive measures. The ideal achievement of modern medicine, the discussion of which involves the consideration of quality, quantity, production, and in the artificially fed preparation of the food on one hand and on the other perverted function, catarrhal inflammation and infection.

A brief review of the most essential changes that occur in the process of digestion, and a consideration of the function of lactation is not out of place, especially as they are the basis of the writer's views on this subject. Digestion, physiologically considered, begins in the mouth by mastication and insalivation of the food. Ptyalin, the most important of the digestion ferments of the salivary secretion, is an unorganized enzyme and belongs to the amylolytic or diastolic group possessing the power to convert starch into maltose through several successive forms of dextrin; its action continues for a variable length of time after the food has reached the stomach, or until neutralized by the acid of the gastric juice.

The function of the gastric juice is that of converting proteid through several successive changes into peptone, the end of stomach digestion. Starches, sugars and fats pass through the stomach unaltered. They are poured into the intestine mixed with the product of gastric digestion, where, under normal conditions, the whole mass of undigested substances are converted by the combined action of the bile, intestinal and pancreatic ferments, or enzymes. All starchy matter that has escaped the converting action of ptyalin is changed by amylopsin and a similar ferment contained in the succus entricus. Steapsin and the bile contain fat ferments, which act on the fatty matter of the food, splitting it up into fatty acids and glycerin, thus effecting their emulsionization and saponification, in which forms they are absorbed.

Trypsin has the property of peptonizing proteid, and exerts its action on albuminous matter escaping digestion in the stomach The succus entericus, in addition to its amylolytic action, contains inert enzymes which have the property of converting cane sugar, maltose and dextrin into glucose.

The young infant, however, does not masticate its food, and while the salivary secretion is present at birth only in small quantity, it increases in amount with the development of the child. The part played in digestion by it in early infancy is an unimportant one. With the eruption of the teeth its amylolytic function is markedly increased, indicating a change in the digestion of the child.

Pepsin and hydrochloric acid are present in small quantity in the gastric fluid of the new-born, but owing to the rapidity with which the food passes from the stomach into the intestine, partly on account of its fluidity, and partly to the shape and position of the stomach, only a small portion of the proteids are peptonized by the gastric ferments. Coagulation of the milk is effected by the rennet ferment, probably aided to a certain extent by the acids of the gastric juice.

The amylolytic function of the pancreatic juice and succus entericus is developed to a certain degree, but not fully established until the sixth to eighth month after birth. The amount of the various digestive ferments secreted are in proportion to the stimulating qualities of the food. As pointed out by Jung after Pawlow, "Vegetable albumin calls for the largest amount of ferment from the pancreatic gland as well as from the stomach, whereas milk albumin calls for little"; further, that "without any doubt there is a distinct adaptation of the juice to the food. Starchy foods get more amylolytic ferment and fatty food more fat ferment." All of which tends to show that digestion in infancy occurs almost wholly in the intestine, and that the stomach acts as a reservoir quite as much as an organ of digestion, also that the young infant is capable of digesting starches and sugars in proportion to the normal secretory capacity of the pancreas, and that starches, sugars, fats and proteids in excess tend to exhaust the secretory function of the glandular organs of digestion by over-stimulation. We know from clinical experience that an excess of these elements of food, separate or combined, cause fermentation, indigestion and diarrheal discharge. Also that these elements must be of the proper kind and in proper proportion to stimulate normal digestion and support the process of nutrition. They are all found in good breast milk.

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Lactation is a physiologic function in woman and all mammals, of course the quantity and quality of the milk varies according to the state of health, diet, exercise, personal hygiene, sanitary surroundings and physical development; all of which should be, and to a certain extent are, under the control of the physician.

There are certain diseased conditions that unfit a mother for nursing her infant from the start, as pointed out by Holt. If the mother be a multipara, a history of the success or failure of nursing in former periods of lactation should be ascertained, and when necessary steps taken to obviate any probable difficulty; her surroundings should be made the best possible compatible with her circumstances; her diet directed, both quantity and quality being considered, in fact, prescribed for with as much care and precision as in any other abnormal condition. An examination of the milk of the primipara is necessary before we can prescribe intelligently for her, except in a general way, i. e., care of the mamma, physical exercise and management of the excretory function of the kidney and bowels.

That maternal nursing when possible is superior to any other method of feeding is an established fact. It is possible always when the mother is healthy and her milk normal. But it must be remembered that all mother's milk is not within the normal limit, though she may be in good health.

We know from chemical analysis that fats, proteids, carbohydrates, mineral salts and water are present in normal mother's milk in certain proportion; unfortunately, however, a determination of the exact percentage of these elements of milk is not a bedside possibility. Yet we have the means of clinical examination which are sufficient for all practical purposes, as pointed out by Holt, and emphasized by Southworth. Early and repeated examination of the milk is imperative in order that the proper mode of living may be adopted for the mother during the nursing period, with the view of preventing the digestive and nutritional disturbances in her infant that are certain to follow the prolonged ingestion of abnormal milk. The new-born infant is an exceeding delicate being, its organs are rudimentary, which, under normal conditions, develop functional activity with great rapidity, the equilibrium of which, however, is easily disturbed the digestive function once upset. Complications develop; the longer the cause is operative the greater the difficulty of re-establishing functional balance. True, some infants (like some patients who get well in spite of treatment) live and thrive in spite of poor food and bad methods of feeding, almost always, however, at the expense of nutrition. Hence our efforts at maintaining maternal nursing must be kept up, and if properly carried out are usually successful. If the milk be deficient in quantity only, supplementary artificial feeding should be adopted, two or more feedings daily, preferably with a spoon from a clean container; or a good wet nurse may be employed to nurse the child alternately with the mother. When both quantity and quality can not be brought up to the proper standard, the wet nurse may be employed exclusively during the first three or four months, after which artificial feeding is to be preferred.

Artificial feeding suggests the selection and preparation of an artificial diet. That cow's milk is the best possible substitute for mother's milk can scarcely be denied; its modification by the method of Holt or Rotch is the first step towards preparation; its further modification by Jacobi's method is of equal importance, the object of the former being that of preparing a diet containing fat, proteid, sugar, mineral salts and water in the same proportion that they exist in mother's milk, also for the purpose of breaking up the curd. The latter method further divides the curd, thus exposing a greater surface to the action of the digestive ferments, markedly facilitating their digestion, a point of very great importance on account of the density and toughness of cow casein. In view of the fact that mother's milk during the early days of lactation contains a minimum quantity of lactose, often amounting to less than 2 per cent., and that proteid is present somewhere between 1 and 2 per cent., indicates that a modified cow's milk should contain at the start not more than 3 per cent. of milk sugar, and owing to the difficulty the infant experiences in digesting cow casein, the per cent. of proteid should be present in not more than 1 per cent., and should the infant be delicate or digestive disturbance be already developed, it should be reduced to 0.5 per cent. or less. These elements may be increased in the food in proportion to the demands of the infant, until at the end of the third or fourth month the carbohydrates shall have been raised to 6 or 7 per cent. and the proteid to 1.5 per cent.

Jacobi has given us some very important hints on the use of milk sugar in the modification of cow's milk for infants, pointing out that milk sugar, on account of the excess of mineral salts and impurities that it contains, partly defeats the object for which it is added to milk solutions, indicating that a pure cane sugar is preferable to the impure milk sugar of commerce.

Milk sugar in excess undergoes fermentation in the bowel, forming lactic acid. Albumin in excess also ferments and undergoes decomposition in the intestines, and both are exciting causes of indigestion, fermentation, diarrhea and catarrhal inflammation, thus preparing a suitable soil for the lodgment and development of pathogenic organisms. It has been truthfully said that "every infant is a law unto itself." Our rules relative to artificial feeding must be adapted to the requirements of each case. Chemical formulæ for the preparation of infant's food are numerous, and manufacturing concerns have flooded the country with their so-called infant foods. Jacobi indirectly disposes of them all in a sentence: "Infants are not chemists and are not bound to be guided by chemical formulæ in their compound physiologic functions."

The writer has thus far had in mind only the modification of pure cow's milk, i. e., bacteriologically safe milk, that containing not more than 30,000 bacterium to each c.c. and entirely free from pathogenic organisms.

The milk of the cities' poor, that transported in cans often many miles by rail, exposed to thermic variations, causing chemical change and, to a certain degree, contaminated with the dust of the road and street, to careless handling before and after it has reached the hands of that class of people huddled together in the tenement districts, that class who contribute a greater number of cases of diarrheal disease the year around than any other class, that furnish the greatest number of deaths among infants and children during the heated term from intestinal infection, cholera infantum, etc., than all other classes combined. These diseases, however, are not peculiar to the poor, they too frequently occur among the better classes. They are prevalent among the poor in the tenement districts partially on account of bad sanitary conditions and neglect; mostly, however, to ignorance of food values, of the digestive capacity of their young, and of the danger lurking in contaminated milk, of the value of sterilization, of infection and its disastrous results. The variety of indigestible and pernicious articles of food allowed infants and young children among those people is too well known to require description. All of which suggests a discussion of moral responsibility, professional and civic, which, however, is beyond the scope and limit of this paper.

Infants fed on good breast milk, properly clothed and otherwise cared for, seldom suffer from severe diarrheal disease, the death rate in such cases being very small. Of 1943 fatal cases of diarrhea collected by Holt, only 3 per cent. had the breast exclusively. In my own experience the percentage of fatal cases of diarrheal disease in nursing infants has been very small. Infants develop diarrhea from other causes, but the percentage of cases and the severity of the discharge is insignificant in comparison to the number of cases and severity of that form due to poor food and improper methods of feeding. Unfortunately the means of ascertaining the percentage of deaths for comparative purposes between breast-fed and artificially-fed infants and children are inadequate. We know, however, that the mortality rate in the artificially fed is much greater and that their resistance to all forms of acute disease is very much less. Also that they are more susceptible to digestive and the more remote nutritional disturbances than the breast nursed.

BIBLIOGRAPHY.

Jung: The Journal A. M. A., 1902.
Holt: Diseases of Infancy and Childhood, 1902.
Southworth: Journal A. M. A., 1902.
Rotch: Disease of Infancy and Childhood, 1902.
Jacobi: Transactions of American Pediatric Society, 1902.

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DISCUSSION

ON PAPERS OF DRS. BOOT, TULEY, M'ALLISTER, COTTON, SNYDER, DAVIS, BRUSH, PARKE AND MASTIN.*

Dr. H. M. McClanahan, Omaha—I merely wish to draw attention to two points brought out in this excellent series of papers, for it is impossible to touch on many of the excellent suggestions. One of these points is that of normal lactation. I gave considerable attention to the literature on this subject a year ago, and found only two articles giving special consideration to this important subject. This question will, I am sure, engage our attention a great deal more in the future than it has in the past. On this Section devolves the duty of educating the public on the importance of normal lactation. If in the next ten years the mothers of this country could be educated to nourish their babies as nature intended, I think it would probably add more to the saving of infantile life than anything else, even than the surgical procedures so enthusiastically advocated, and to which so much attention is directed.

The other point I wish to dwell on is that of mixed feeding, for, I believe the majority of practitioners do not fully recognize its importance. The idea has prevailed that if the mother has not sufficient breast milk she should not nurse her baby, but this idea is wholly erroneous; let the baby have all she has, and then supplement this by bottle feeding. I have recently had under my care a child of seven months which had been nursed, and was losing weight. The whole secret was that the milk, as shown by analyses, was good, but there was not enough of it. I, therefore, supplemented this breast feeding by two or three bottles, when the gain in weight not only reached normal, but exceeded it.

The question of the antitoxic influence of human breast milk on a baby I think is very important. You will remember that this question was alluded to by Dr. William H. Welch in his masterly address in London some months ago. The influence of this Section should go out to the laity through the profession, and the mothers should be taught the value of breast nursing, and how it may be best maintained.

Dr. Charles G. Kerley, New York—With regard to the classification given in the first paper: It seems to me a waste of time to make a classification based on clinical manifestations. These cases are all infectious, and when we know more about them we will probably learn that the infection is very much the same in all. Abundant postmortem experience shows that it is practically impossible to make a classification in which the clinical manifestations and pathologic findings fit. In other words, no definite set of symptoms corresponds to any definite lesion.

I agree with almost everything that has been said by Dr. Tuley, though perhaps I would begin a little earlier in regulating the mother's life. In order that a mother may successfully carry out the nursing function, a nursing régime and *habits of life suited to this purpose must be established*. She should have definite periods of rest and certain lines of diet—usually a diet very much like that to which she was accustomed hitherto. I would not put a society girl on the same diet as I advise for one of my dispensary mothers. When maternal nursing is referred to in papers or in discussions, the so-called "society girl" comes in for a generous amount of abuse. I have never known a mother—and I have known thousands of mothers—no matter what her station in life, who is not willing to nurse her child if she can. According to my observations, the maternal instinct is very strongly developed. A mistake often made with the better class of mothers is in our making the nursing a burdensome matter. Before becoming mothers these young people have been accustomed to having a good time, and if they are put under strict nursing orders every two or two and a half hours without any means of recreation, the nursing is apt to be a failure. Among this class of patients I allow the baby one bottle a day. This enables the mother to secure needed recreation, out-of-door exercise and entertainment. There is no reason why she should not attend a matinee or the opera. They certainly are much more successful when a moderate amount of liberty is allowed; more of them are able to nurse their children and nurse them longer. The addition of one bottle a day is also of service in the case of such family emergencies as sickness or sudden calling away of the mother.

I do not know of any specific medication or means which is of value in increasing the milk supply: good food, fresh air, absence of worry, exercise and attention to the bowel function ordinarily answer.

Regarding the question of artificial feeding, I think we sometimes go rather wide of the mark in our papers because we attempt to apply one principle to all sorts of conditions of children and society.

I feed three classes of children: First, the dispensary, or out-patient infant; second, the infant resident in the hospital or children's institution; third, the infants of the better class. Each type requires special management. Including all of the above we must still make another division—the ill and the well. Many physicians attempt to feed sick babies in the same way as well babies. This explains much of the dissatisfaction in connection with infant feeding. It is a comparatively easy matter to feed babies artificially if we take them from the beginning of life. With children who are ill with impaired digestion as a result of indefinite, vacillating or hysterical feeding it is very different. On attempting to feed these digestively sick infants according to the rules laid down in the books for healthy infants, trouble is naturally met. Such a child must be treated as though it were ill. Its stomach must receive due consideration. Very commonly I see children who have been fed properly from the standpoint of the well child, but who fail to thrive because they cannot take care of the food given them. In many of these cases in which the infant can not digest the proper amount of strength of food, much benefit arises from stomach washing, although there has been no vomiting. A tube introduced into the stomach will show the presence oftentimes of a large amount of mucus. I recall one such case in which the stomach washing brought away an ounce and a half of mucus. Under daily washings, although there was no vomiting, the child made satisfactory progress. I put these children on a sick diet. For the first day or two I make use of a dextrinized gruel. Condensed milk answers well for a week or two with many of these infants. It is easier of digestion than cow's milk, and sustains the child until it is ready for a cow's milk mixture. I wish to emphasize that I use condensed milk only as a temporary diet for the digestively ill; it is wholly unfitted for well children.

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*The first five of these papers appeared in The Journal June 13.

I wish this Section would take up the question of the necessity of state control of the milk supply. When the chairman referred to the lack of interest the state took in the care of the young, it reminded me of the fact that in all large cities from 12 to 15 cents must be paid a quart for a safe milk.

There must be a far more efficient state or municipal control of the milk supply in our larger cities if we are ever to secure a milk at a reasonable figure that is fit to give a baby. This can be accomplished by establishing in large cities milk laboratories on the lines laid down by Mr. Nathan Straus, of New York. If the purest milk be placed in a tenement where the mother knows nothing about caring for it, it will rapidly become contaminated. Hence with such laboratories it will be necessary to have district physicians and nurses to instruct the mothers how to keep and prepare the food and how to properly care for young infants. Several years ago we began at the Babies' Hospital to issue pamphlets of instructions with regard to the care of children. In these pamphlets the mothers were instructed with the first sign of gastrointestinal derangement, to take the child off milk and give it a barley-water diet, give it a teaspoonful of castor oil, and to bring the child to the dispensary.

The mortality from diarrhea in New York city last summer in children under 5 years of age was nearly four thousand. The year before it was about 4,700. During these years it has been shown that this tremendous mortality is unnecessary and preventable. I reported recently from the out-patient department of the Babies' Hospital a series of over 850 cases treated, with 3 per cent. mortality, or about thirty deaths.

Last year Dr. William H. Park interested himself in the milk supply, and selected at random among the tenement districts, fifty infants under 1 year of age, who were put under the care of a physician, who visited them regularly and saw that they received the Straus milk, which was the best obtainable. The mothers were instructed as soon as they saw vomiting or diarrhea to stop the milk, put the child on barley-water and summon the physician. Of these fifty cases among the poorest and most ignorant people, there was not one death. Our records at the Babies' Hospital of 3 per cent. of deaths were obtained among children of this class who came to us ill with diarrhea. The prevention, therefore, of a large summer mortality from diarrhea, lies in the proper selection and care of the food, and in a general common sense management of the infant. It is impossible in New York city for a mother with 8 cents in her hand to exchange it for a quart of safe milk. This should not be so, and it is the duty of municipalities to guarantee a safe food for the offspring of the poor.

How ridiculous for men in exalted positions in church and state to become hysterical over race suicide and small families, when no effort whatever is made officially to preserve the lives of the children already here.

Regarding the Shiga treatment: I have seen eight or nine cases of Shiga diarrhea which have been treated by the Shiga serum. Some of these cases were mild, some severe; clinically they differed in no respect from what we have, in lieu of a better name, called "summer diarrhea." Probably a great majority of the cases of intestinal disease which occurs in infants during the summer were found due to one means of infection—the Shiga bacillus. The results in those small number of cases has been sufficiently good to impress me favorably with the serum treatment. As yet we do not know the proper doses to fit the varied degrees of severity, or how often it is wise or safe to repeat it. Our knowledge in this respect will doubtless be increased a great deal during the coming summer.

Dr. R. B. Gilbert, Louisville, Ky.—I wish to emphasize what Dr. McClanahan has said regarding the matter of lactation. We all know that many mothers do not nurse their children, and I think popular instruction from physicians would increase the number of nursing mothers.

As to the modification of the mother's milk while nursing, and even before the birth of her infant, this should receive due consideration. With a little care on the part of the pediatrician, the mother may be placed in such a condition that her milk will be nutritious and abundant. The new-born infant really does not require nourishment for twenty-four or forty-eight hours, and I think the mother should not be worried and annoyed by efforts to make the child nurse within two or three hours after delivery. The infant at this time requires nothing but sterile water, warmed to the temperature of the body. I believe that a newly born infant can live for eight days just as well as older infants, without food, and I may add that I believe if saline enemata are given this period might, if necessary, be increased. Anxiety, emotional excitement and mental influences generally will modify the breast milk very materially, and often very seriously. I recall one case in which the child was put to the breast immediately after a violent fit of anger. The infant was well at the time of being put to the breast, and within an hour it died in convulsions. It was found that the stomach and esophagus were filled with tenacious coagulated milk. The use of whiskey and especially of tobacco by the nursing mother greatly deteriorates her milk, and makes it poisonous for the infant. The colostrum in the first milk secreted remains for about a week, and is more abundant at the beginning. Instead of allowing the infant to nurse out this colostrum, in the case of infants having a tendency to diarrhea, this should be milked out and thrown away. Another thing which greatly influences unfavorably the mother's milk during lactation is sexual excitement. I am sure I have known of deaths among nursing infants follow excessive venery. The infant should not be allowed to nurse the mother for three or four hours after sexual excitement, and it would be still better to nurse out a little of the milk and throw it away. The knowledge laid down in Dr. Davis's paper should be disseminated among the nursing mothers throughout the country.

Dr. P. J. Barcus, Crawfordsville, Ind.—I wish to emphasize the importance of seeing that the minute details of management and treatment are carried out. Too much of our teaching seems to be directed toward looking after the child after it is sick, instead of while it is well. Formerly the new-born child was entrusted to the grandmother; we of the present time trust the new-born infant very largely to the trained nurse. This, I think, is a mistake. I am a strong believer in the use of water during the first few hours of life. I think the child should be put to the breast in the first hour or two. If the colostrum corpuscles continue for a few days it is then necessary to draw the milk with a pump, and not give the child this colostrum. It is very necessary that the child should have more water than it usually receives. We should not trust the infant to the nurse alone until assured that modern principles will be fully carried out.

Dr. Thomas S. Southworth, New York—With regard to the formation of milk commissions, I would say that I recall very well sitting beside Dr. W. H. Park in New York at a dinner at which he proposed this certificate of the milk for the city. This proposition was made tentatively at a private gathering of medical gentlemen to see how it would be received. All of those present recognized the excellence of the suggestion, but uppermost in the minds of all was the question as to its practicability; yet the next summer, by the aid of the Rockefeller Research Fund, this matter was undertaken, and by the next fall there were firms producing "certified" milk, and later what was called "inspected" milk. The latter is much the same as the certified milk, except that it is furnished in quantity in the cans, and not in bottles. I have been strongly impressed in my work among the poor in the out-patient department of the

Babies' Hospital with the willingness and anxiety of the poor to secure the best possible milk.

I am inclined to think that in one of the cases reported by Dr. Tuley, in which breast nursing was given up because of menstruation, breast feeding might have been continued if the breasts had been pumped during menstruation and artificial food given only at this time, the breast feeding being resumed later.

With regard to the cases reported in Dr. Davis's admirable essay, I would say that a great deal of persistence is required in order to maintain breast feeding because a strong pressure is brought to bear on the physician by the family and friends if the infant is not thriving. I have already published a case in which in the very hot season a child was not thriving, and the stools for six weeks since birth had been loose and green; nevertheless by getting the mother out-doors, giving her iron and feeding her on corn-meal gruel, she was able to continue nursing, and the child thrived at the breast and was over the average weight when 1 year old. I do not think that baby would have survived if it had been taken from the breast and put on artificial food during that very hot summer. I have in mind another case in which a baby died when a few days old because of difficulties in maternal nursing. The second child was wet-nursed for fear there might be trouble, and this baby survived. The mother determined to nurse the third child, and although the milk did not agree at first, by waiting until the colostrum period was passed, and by getting the mother in better condition, she was able to nurse the child satisfactorily. The same thing happened with the fourth child, although it took a longer time to secure a good result, as the mother had been very ill. She is now nursing her child most successfully, and it is making gains far beyond that of the average baby at the breast because the mother has an abundant supply of milk of the best quality. We should not be too soon discouraged in our attempts to restore the breast milk which apparently does not agree with the child.

DR. GEORGE N. ACKER, Washington, D. C.—I think that a great many mothers could be made to nurse their children, yet I recall many mothers who refused to nurse their offspring and who had taken this position even before the birth of the child. This is a matter which should be attended to from the first. I have seen several instances in which the wearing of corsets has prevented the secretion of milk. Nurses can be of great assistance to the physicians in this matter. Holt read a paper on this subject some years ago, and made the statement that only one American woman in ten was able to nurse her child up to the third month, and that it was a curiosity to find an American mother who could nurse after this time. I think even the milk of a poor mother is better than modified or laboratory milk. Recently the health officer of Washington endeavored to force the milk men to clean the cans before returning them to the country, but he met with much opposition. I was surprised to find Mr. Gordon, of the Walker-Gordon Laboratory, coming before the commission and testifying that a little dirt in the milk was not of much importance. With regard to artificial feeding, I make it a point to begin with low percentages and feel my way. Carried out in this way, the modification of milk for infant feeding is usually a success.

DR. JOHN C. COOK, Chicago—There is a pathologic condition in these bowel troubles of children which has not been very thoroughly elucidated in the literature or brought out in this discussion. In a great majority of the cases there is an accumulative toxic condition, the result of previous bad feeding and hygienic surroundings. These children have been badly fed from day to day, both as to quantity, quality and times of feeding, with the result that the powers of resistance have been so greatly diminished that last feeding is as a torch to an already well prepared tinder box, and many times we are prone to accredit it with results that it is not entitled to.

DR. THOMAS S. SOUTHWORTH, New York—Dr. Kerley and others have already spoken of the difficulty in forming classifications which are entirely satisfactory because we find that the lines of distinction are not so clearly marked clinically between the different types of the more acute infections of the intestine, and also because, given a certain course of clinical symptoms, it is extremely difficult to predict from them what will be found in the autopsy room. Perhaps the most interesting field that has been opened up for some time is that with regard to the Shiga bacillus and its allied forms and their etiologic relation to intestinal affections. The impression has gone abroad that the summer diarrhea of children may eventually be found to be attributable to these bacilli, but I think it will be found that certain epidemics of intestinal disorders in children are due to this bacillus, or to allied forms, and that there still remains a very large proportion of the more acute intestinal affections in which these bacilli are not present. Last January I had an extremely interesting experience with one type of this bacillus in the Nursery and Child's Hospital, New York. The infection got into a ward of small children, and resulted in eight deaths. The type of the disease was rather interesting. The first symptom was a rise of temperature, and with this there would be found on the napkins pink or rose-colored stains of mucous. In some cases the hemorrhages from the intestines were larger because there was much congestion of the intestine. The stools were not particularly frequent, and many of them were fairly well digested. Coincident with the rise of temperature and the appearance of these blood-stained stools there was a very sharp fall in weight, despite the best efforts at feeding. These children would lose several ounces a day. They would then suddenly go into a collapse, evidently from a toxic accumulation in the system, and although they might be temporarily aroused from this collapse, death would occur within twenty-four hours. The pathologic findings in these cases, which are to be published shortly, showed varying degrees of enterocolitis, especially of the catarrhal type. There was intense congestion of the lower portion of the intestine, particularly those in which there had been considerable transudation of blood. In one case showing otherwise similar symptoms to the others, there was an ulcerative gastritis with little or no ulceration of the colon. These cases were due to the indol-producing type of the Flexner-Manila bacillus, an organism belonging to the Shiga group.

DR. HENRY E. TULEY, Louisville, Ky.—It seems to me that this symposium has been productive of great good. One thing especially has been brought out with great unanimity by the papers of those taking part in the discussion, i. e., the importance of breast feeding. Another question on which this section should go on record is as to the importance of the classification of diarrheal diseases. The classification at present is very chaotic, and we need a good classification as an aid in our work. This revision, which should be made, is particularly timely now that we have received such valuable information with regard to the Shiga bacillus. In order to bring the matter before the Section I move that the Chairman appoint a committee of three to consider this subject to report at the next meeting.

In the case reported in my paper and commented on by Dr. Southworth, an attempt was made to preserve maternal nursing, but the mother was a very nervous woman, and the excitement incident to the sickness of her infant caused a cessation of the lacteal secretion, and I was unable to keep up the supply over the menstrual period.

If we would instruct mothers more minutely as to the importance of recognizing a slight intestinal disturbance and correcting it by a change in, or a stopping of, the milk, there would be much less trouble in controlling such affections. The laity are so firmly of the opinion that teething is responsible for most of the errors in digestion that it is time they were enlightened on this point; through lack of such knowledge indigestion is allowed to go on until the storm comes to which Dr. Cook has referred. A child is not able to digest as strong a formula of modified milk in hot weather as in cold weather, and hence we should forestall this, even at the expense of a possible slight loss of strength and weight, rather than allow the development of trouble in hot weather.

I have recently had an experience in endeavoring to get up a milk commisison in Louisville, but I was checkmated because the opinion prevailed that it would lead to the advertising of a certain milkman's milk, and that the profession generally was not interested in such a matter. Our health officer has done a great deal toward obtaining a pure milk supply, but unfortunately all of his work has been in the line of chemical investigation, and not bacteriologic study. He practically has no authority under the law to extend the search up to the dairy where most of the trouble occurs. One of the dairymen was recently arrested for feeding swill, in violation of the statute, and he retained as his attorney the father of the child whose case I have reported, and this attorney defended the dairyman, although he had been most earnest in endeavoring to secure pure milk for his infant. The milk supply of Louisville comes partly from another state, and we can not control that portion of the supply unless it is below the chemical standard.

We often learn useful lessons from the laity. Recently a negro monthly nurse, who is very competent and has had a large experience among the best families in Louisville, stated to me that she made it a rule never to put the baby to the breast until the third day, and that she did not give the child anything but water during this time. She insisted that in this way she invariably had good babies, that they did not lose much weight, as determined by actual weighing, and that the mothers under her care never had fissured nipples because she saved them from the useless tugging at the nipples usually allowed in the first few days before the flow of milk has been established. Some mothers continue nursing for a very long time with the idea of preventing conception. I think we should endeavor to stop nursing as soon as possible after the end of the first year.

DR. A. C. COTTON, Chicago—The statement has been made in this discussion that breast milk should be stopped which apparently does not agree with the child. If the words breast and milk were left out I would agree to the statement—in other words, stop anything that does not agree with the child. Why single out breast milk? I do not think that in the way we look at this subject we treat it fairly. Years ago somebody "shied" at some of the difficulties of breast feeding, and we jumped clear over the fence and into the worst kinds of boulders and thickets and stumps of artificial feeding in order, like a frightened horse, to get away from this little difficulty. Why do we talk about influencing legislation to secure a good milk supply when one-half as much energy expended in the right direction would secure a far better supply from the source which nature intended should be used? We are all in favor of a pure milk supply for the larger children, but why not attend to the natural supply of breast milk for the young infant? We can not begin to make cows' milk as good as mother's milk, no matter how we treat it. We are apt also to mix up supplemental feeding and substitute feeding. Why change the food as soon as there is a little difficulty with the feeding? If the mother can be allowed a little more liberty, as suggested by Dr. Kerley, we shall improve her mental condition and incidentally her breast milk. I like this idea very well, and all who have had experience know that by an occasional substitute feeding under these circumstances we may do good. Every time we take away from a baby even a little mouthful of milk left in the mother's breast we do an injury to that infant. Disturbed lactation must be the future study of the pediatrician, beginning, as Dr. Davis does, by preparing for lactation and feeding the newly-born infant on placental blood. I take issue with Dr. Davis, however, with regard to the artificial milk, for six cases fed on malted milk or anything else does not prove anything. I am disposed to think that there was something wrong with the domestic hygiene in the cases reported, possibly something in the inner life of the family which disturbed and interfered with lactation. I have, on a previous occasion, reported upward of fifty cases of disturbed lactation resulting from excessive coitus. Because we are "baby doctors" is no reason why we should consider this subject too delicate a one to inquire about. We have been told to-day that these babies are sick babies, and should be dieted accordingly, but who thinks of dieting a baby fed at the breast? Let us not forget to teach the nursing mother that her child may be fretful because of thirst, and that it should be given water instead of so much milk. Pump out the breast and feed the child water. It is all very well to organize to secure a good milk supply, but it is far better to organize to secure good wet nurses. There are many foundling institutions in which the death rate has been so appalling that they do not dare to publish the results. What these institutions stand in dire need of is breast feeding with some supplemental feeding. The burning question of the hour is, how to prevent this priceless pabulum from going to waste. I care not what the bacillus is, if we keep on exciting acute indigestion we shall not get rid of it by any bactericide that will ever be discovered.

DR. J. ROSS SNYDER, Birmingham, Ala.—I agree with Dr. Kerley that we do not need to concern ourselves with the question of race suicide; this will take care of itself if we take care of the children already in existence. I should not care to conduct a party of legislators into the Yellowstone Park or the swamps of the Mississippi, but I should like to take them into my tenements, for I am sure I could show them something which would interest them. I have come to believe that incubators must be at work in these tenements rather than a natural process of maternal hatching. I have been greatly pleased with the accumulating testimony to the effect that we are doing something to prolong and improve lactation, and I can indorse Dr. Cotton in the earnestness of everything that he has said on this subject. When I was on the staff of the Nursery and Child's Hospital, New York, Dr. Southworth tried to get me to introduce certain measures which were calculated to improve the supply of breast milk, and what I learned then deeply impressed me. A peculiar case came to my notice last October. I was called in to see a breast-fed child that was not doing well. Examination of the milk and stools showed the proteids to be too high. Investigating the life of the mother, I found she was leading a very sedentary life because of an ingrowing toe-nail. This was removed and she was told to take plenty of out-door exercise and drink corn-meal gruel. In a short time the baby experienced no further trouble in digesting the mother's milk.

DR. EFFA V. DAVIS, Chicago—I have been very much edified by this series of papers, and yet I feel that some things should not pass without explanation. Objection was made to my plan of early nursing on the ground that the child might exist a considerable time without any food, but I wish to emphasize that the highest death rate occurs in the first month of life, and as the pediatrician is rarely as close to the infant at this time as the obstetrician, the latter should carefully consider this matter. I feel the safest plan for the infant is to establish early nursing. According to my experience the application of the child to the breast in the first few hours after delivery is not a tiresome process, but one full of pleasant interest to the mother, and the function of the glands is more naturally established by the system of nursing which I have suggested. I should like to ask in this connection what condition the mammæ are in when the plan of the negro nurse is adopted, of not applying the child to the breast for three days?

It is true that the baby can live for a considerable time without food, but Holt and others report cases of inanition fever as the result. Moreover, the secretion in the breast is natural; colostrum is a physiologic product that nature intended for the child, and it will not disagree in the great majority of cases. In an institution with which I am connected the nurses were formerly taught to give the babies only sterilized water for the first two or three days of life; but I found so much water being given that it was difficult to get nursing habits established, and much loss of weight occurred.

The first five cases reported came under my observation during twelve years of work, in which time I have attended 1,500 or more confinements. I have reported them because they are not common.

I can not understand the statement quoted from Holt, that mothers who can not nurse their babies beyond three months are the rule—because this is certainly not true in Chicago.

With regard to modifying the mother's milk, in the cases reported I used every possible means known and approved, with the hopes of successfully feeding the children without removing them from the breast. I believe all of these five children would have been better treated if I had taken them more promptly from the breast milk, instead of waiting, as I did, three, four and in one case nine months. Out-door exercise was employed as soon as possible and general habits regulated. In some of the cases I was very particular to inquire regarding coitus, and found it was not a possible factor in the disturbance.

I do not stand as an advocate of artificial feeding. I am always very reluctant in taking a child from its mother's milk, and should be glad to know of any new method of preserving or improving the breast milk in the class of cases reported.

Dr. T. D. Parke, Birmingham, Ala.—With the rest I am, of course, in favor of the breast as against the artificial feeding of children, and I always endeavor to obtain a wet nurse if for any reason the mother is unable to nurse her child. I am also heartily in favor of the movement for better milk. One of the first questions I always ask my patients is as to the source of the milk. I endeavor to have the milk procured from some private family near by having a cow. I instruct them carefully with regard to the care of the milk when it is received. With regard to the prolonged withdrawal of food, the main point in my paper, I would say that I was driven to that because I found that in some cases barley water soured on the stomach, and that in other cases the egg albumin appeared to act as a poison, and also because broths made with chicken gave rise to foul-smelling stools. It is very easy to read a paper as to how long a child was kept without food, but I can assure you that it was not easy to carry it out in private practice. Fortunately these cases occurred in families of high intelligence, and who were able to have trained nurses. Dr. Cotton spoke about taking the mother's breast from the child. Whenever these children become sick I stop the breast just as soon as I stop other food. I believe this practice saves trouble and time, that the child will get well more quickly, that there will be fewer ill-smelling stools, and that the restlessness resulting from absorption of toxins from the intestinal canal will be absent.

THE SAFRANIN TEST FOR SUGAR IN THE URINE OF CHILDREN.*

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CHICAGO.

A little over five years ago the writer's attention was directed to the safranin test for sugar in urine by Alfred H. Allen's book on "The Chemistry of Urine."

Safranin, which is one of the coal-tar dyes, occurs in commerce as a brownish red powder which forms a blood-red solution with water. The writer has invariably used in his work the preparation made by Grübler.

M. Louis Crismer of Liege was the first to advocate the use of safranin as a test for sugar in urine. His method was to heat together 1 c.c. of urine, 5 c.c. of a 0.1 per cent. solution of safranin in water and 1 c.c. of a 10 per cent. caustic soda solution. The decolorization of the safranin occurs if the urine contains sugar. I have been unable to get Crismer's original article, but have found abstracts of it in several places.[1] According to Crismer, some urines which show sugar by the test above given will fail to show sugar by Fehling's test, but no urine which reacts to Fehling's test ever fails to give the safranin reaction.

Prof. Chas. C. Curtman[2] has found the safranin test proposed by Crismer to be very reliable for the detection of abnormal glucose in the urine. He has never found a normal urine of which 1 c.c. decolorized more than 2 c.c. of the test solution. He holds that if 1 c.c. of urine decolorizes 5 c.c. of the safranin solution (1-1000) glucose is present in abnormal quantity.

Safranin is very readily oxidized, and exposure to the air or agitation of the decolorized solution will very readily bring back the red color. So sensitive is the safranin to the action of the atmospheric oxygen that a single bubble, rising from the bottom of the test tube in which the reaction is occurring, will cause a partial but distinct return of the red color. This fact limits the application of the reaction in a quantitative way. After numerous and varied attempts to use it in an exact quantitative manner, I was finally forced to adopt the approximate quantitative method suggested by Allen. In my hands this method finally took the shape to be presently described, and while only approximately quantitative, has given me some valuable results from a clinical standpoint.

According to Crismer, safranin is decolorized by sugar, but is not decolorized, when heated in alkaline solution, by uric acid, creatin, creatinin, chloral, chloroform, hydrogen peroxid, and only slowly (but in the end completely) by solutions of albumin. Personally I have had no opportunity of verifying this statement, but at my request Dr. Maximilian Herzog, professor of pathology in the Chicago Policlinic, has conducted some experiments on this line, and he reports to me that his experiments show that uric acid does not decolorize safranin, even if used in large amounts. The same is true of creatinin. He also found that morphia sulphate, chloral hydrate and powdered rhubarb root did not decolorize the safranin solution. His experiments were made in the same manner and with the same precautions that I employ in making the test in urine.

Allen has fully confirmed the observation of Crismer as to the inability of uric acid and creatinin to decolorize safranin. Whereon Allen says, "any discharge of color (of the safranin) may confidently be set down to the presence of sugar."

Clinically I have found that extensive reduction of safranin by urine is generally (but not always) associated with autotoxic symptoms, and hence, whether it always means sugar or not, it is a readily applied and valuable index of certain forms of autotoxemia and assists in the analysis and classification of these complex conditions.

The method of applying the test, as I use it, is as follows: A series of test tubes is taken, into each of which is put 1 c.c. of the urine to be tested, 1 c.c. of normal sodium hydrate solution and varying amounts of a 1 to 1000 aqueous solution of safranin. Into the first test tube is put 1 c.c. of the safranin solution; into the second, 2 c.c.; into the third, 3 c.c., and so on, until all the tubes are prepared. All the tubes are then placed in a glass beaker containing enough glycerin to rise above the level of the solutions in the test tubes. Heat is then carefully applied to the bottom of the beaker (which, of course, is protected by wire gauze) and the glycerin heated nearly* to the boiling point of water, a thermometer being perferably immersed in the glycerin to keep track of its temperature. Occasionally no reaction occurs, but generally the red color of the safranin is discharged in one or more of the test tubes, fading first from the tube containing 1 c.c. of the safranin solution, next from that containing 2 c.c., and so on up. The number of test tubes in which the safranin is decolorized is then recorded on the urinalysis slip. This number I call the Safranin Index. Occasionally the color is discharged in a certain number of the tubes, say, for example, 3, and partially in the next. Such a result I record as ½ more than the number of c.c. completely decolorized, hence in the example taken the result would be recorded as 3½. In making the test it is imperative that the material in the test tubes does not boil, for even a single bubble will cause a partial reoxidation of the safranin and thus vitiate the test. Formerly I used a water instead of a glycerin bath, but the agitation of the tubes by even slight boiling of the water of the bath, even when their contained solutions did not boil, always produced some reoxidation of the safranin.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M McClanahan, A. C. Cotton and H. E. Tuley.

[1] Jahresbericht uber die Fortschritte der Pharmakognosie, Pharmacie und Toxicologie, 1888, p. 274. 'Phar. Jour. (3), xix, 348.

[2] Pro Amer. Phar. Assoc., 1889, p. 661.

* The reaction occurs at 180° F. It is never necessary to raise the temperature above 190° F. When the sugar is largely in excess of the safranin, I have seen the reaction occur at as low a temperature as 140° F.

Many months slipped by before I felt that we had the method sufficiently well in hand to warrant recording results. At first the test was only occasionally applied, but very soon it became the rule to make the safranin test in every urine examined in my laboratory, and for about three years this rule has been in force. It has not been possible always to carry this out; at times the quantity of urine received would not suffice for this, and such other tests as might in the particular case be deemed more serviceable; at times darkness coming on would interfere; and again, time itself would not permit. Notwithstanding these interferences, I find that the test has been made in approximately two-thirds of the urines examined, hence the results here presented are in no sense selected cases. Even of those made some few urinalyses had to be rejected from this discussion because of lack of data to determine the sex and age of the individuals from whom the samples came. There then remained for consideration in this paper 3,504 urinalyses, represent 861 different individuals. Of these 23 samples were from adults, the remainder were from boys 1,775 samples and from girls 1,706 samples. The cases were all private patients and mostly office cases.

Some time ago I called the attention of Dr. H. B. Favill of Chicago to the safranin reaction, and he agreed to use it in his laboratory. His laboratory assistant was taught the method by my assistant in my laboratory, and consequently we are sure that absolutely the same method has been used in each. Dr. Favill has very kindly turned over to me for use in this paper the results of the analyses of 58 samples of urine from men and 84 samples from women, which have been combined with my own 23 observations of adult urine, and both appear in the table.

In preparing Table 1 it was found necessary to omit the urinalyses of two boys, Lewis G. and Ralph W. Among the 1-year-old boys the urine of Lewis G. appeared 46 times with an average safranin reaction more than double the average of the others. Among the 2-year-old boys it appeared 19 times with an average of more than 2½ times the others. Among the 3-year-old boys it appeared 9 times, with an average slightly below that of the others. Practically the same was true of the urine of Ralph W., which appeared 14 times among the 1-year-old boys, twice in the 2-year group and 10 times in the 3-year group. These two boys were distinctly abnormal in their safranin reactions, and for this reason their urines were examined frequently. These two facts caused their urines to have an undue weight in the determination of the averages, and as these averages were intended to establish norms, it was deemed proper to omit all of their urinalyses from years 1 and 2, but to include all of them that belonged to year 3. In computing the table the urinalysis cards were first distributed as to sexes, and then each sex separately divided as to years, after which the average safranin index for each year was determined by finding the sum of all the indices of that year and dividing by the number of urinalyses involved.

Table 1 shows for each sex the number of urinalyses for each age by years, the sum of the safranin indices in those urinalyses, and the average or normal safranin index for the particular year. For convenience, the age of children under 1 year appears as zero; each age includes all of that year up to the following year. Ages were recorded as that of the last birthday, hence children under 1 year appear as of the age of zero.

TABLE I.—SAFRANIN DATA.

	Males.			Females.		
Age.	No. Exam.	Total.	Norm. Saf. Index.	No. Exam.	Total.	Norm. Saf. Index.
0	78	72.5	0.93	35	31.5	0.90
1	133	226.0	1.70	178	258.5	1.45
2	214	458.5	2.14	264	457.0	1.73
3	212	468.0	2.21	205	410.5	2.00
4	205	436.5	2.13	216	379.0	1.75
5	165	308.0	1.87	146	228.5	1.57
6	132	251.0	1.90	125	176.0	1.41
7	88	161.0	1.83	113	176.5	1.56
8	74	121.5	1.64	93	128.5	1.38
9	95	194.5	2.05	88	152.0	1.73
10	122	208.5	1.71	99	111.0	1.12
11	92	155.5	1.69	51	95.5	1.87
12	44	66.0	1.50	20	32.5	1.63
13	30	37.0	1.23	20	45.0	2.25
14	8	14.0	1.75	11	20.5	1.86
15	1	3.0	3.00	2	1.5	0.75
16	0	0.0	0.00	14	18.0	1.29
17	2	2.0	1.00	17	34.0	2.00
18	0	0.0	0.00	5	7.0	1.40
19	1	1.0	1.00	4	5.5	1.38
20	0	0.0	0.00	1	1.0	1.00
Adults..	66	92.5	1.40	99	158.0	1.59

The normal safranin indices of the two sexes for the several years given in Table 1 are graphically represented in Chart 1. A study of the safranin curve shown in Chart 1 reveals the following:

1. The normal safranin index is low during the first year of life, but gradually increases, reaching its maximum between 3 and 4 years, after which it slowly decreases for a number of years, but never becomes so low as during the first year.

2. During the first ten years of life boys have a safranin index constantly higher than that of girls.

3. At 11 years the safranin index curves of the two sexes cross, the girls becoming superior. While this may be entirely an accidental showing, it is in all probability a pubescent phenomenon. It is significant in this connection that the growth curves of weight, stature and height sitting of the two sexes cross at almost exactly the same age. Further observations, however, will be necessary to confirm this point. The sharp rise at 9 years is possibly fortuitous, although it must be admitted that the fact that both sexes show the same rise would indicate that it is not altogether accidental. Further, a careful examination of the urinalyses of that age shows nothing to indicate that it is not normal. A similar rise also occurs in the urea and acidity curves.

It being desirable to compare the safranin averages at the different ages with the percentage of urea and the degree of acidity at these ages, these were computed from the same urinalyses which furnished the safranin data. Many more urinalyses were available for this latter purpose, but it was considered preferable to use only those from which the safranin table had been derived. It will be noted that in a few instances urea and acidity estimations were missing from some of the safranin cards, and hence the tables do not at all times agree as to numbers examined.

The urea was occasionally estimated by means of a nitrometer, but more generally with a Doremus ureometer. The acidity was determined by titration with decinormal soda solution, the end reaction being determined with phenolphthalein. The number of c.c. of decinormal soda solution necessary to neutralize 10 c.c. of the urine was recorded as the Acidity Index.

Table 2 gives for each sex and each year of age the number of urinalyses, the totals of urea percentages and the average or normal urea percentages.

TABLE 2.—UREA DATA.

	Males.			Females.		
Age.	No. Exam.	Total.	Norm. Urea Per Cent.	No. Exam.	Total.	Norm. Urea Per Cent.
0	78	53.45	0.69	34	27.5	0.81
1	133	230.0	1.73	176	288.25	1.64
2	214	431.6	2.03	264	458.4	1.85
3	211	482.2	2.29	204	398.75	1.95
4	205	426.55	2.08	216	396.8	1.84
5	165	346.7	2.10	145	278.2	1.92
6	131	294.7	2.25	125	234.2	1.87
7	88	186.3	2.12	113	208.0	1.84
8	74	141.2	1.97	92	172.7	1.88
9	95	211.3	2.22	88	188.6	2.14
10	122	253.0	2.07	99	154.7	1.56
11	192	185.2	2.01	51	100.0	1.96
12	44	83.2	1.89	20	35.5	1.78
13	30	52.5	1.75	20	44.5	2.23
14	8	15.8	1.98	11	21.5	1.95
15	1	2.7	2.70	2	1.5	0.75
16	0	0.0	0.00	14	20.8	1.49
17	2	3.2	1.60	17	31.0	1.82
18	0	0.0	0.00	5	7.1	1.42
19	1	1.5	1.50	4	4.6	1.15
20	0	0.0	0.00	1	1.1	1.10

Table 3 gives similarly for each year and sex the number of urinalyses, the totals of the acidity indices and the average or normal index of acidity. By presenting the data in this manner the opportunity is offered to others to combine the *results of their own similar* observations with these. The resultant data of Tables 2 and 3 are shown graphically in Chart 1.

TABLE 3.—ACIDITY DATA.

	Males			Females.		
Age.	No. Exam.	Total.	Norm. Acid. Index.	No. Exam.	Total.	Norm. Acid. Index.
0	72	137.7	1.91	31	65.3	2.11
1	123	451.0	3.67	165	575.4	3.49
2	211	885.3	4.20	258	927.4	3.59
3	203	866.7	4.27	196	736.5	3.76
4	204	810.1	3.97	211	680.5	3.23
5	164	629.4	3.84	144	486.6	3.38
6	132	520.9	3.95	124	388.4	3.13
7	88	324.0	3.68	112	383.0	3.42
8	74	217.8	2.94	93	319.1	3.43
9	93	376.5	4.05	88	372.3	4.23
10	121	427.0	3.53	91	249.2	2.74
11	92	331.6	3.60	51	153.7	3.01
12	44	126.0	2 86	20	53.2	2.66
13	30	72.5	2.41	20	74.4	3.72
14	8	26.4	3.30	11	36.5	3 32
15	1	4.0	4.00	2	2.6	1.30
16	0	0.0	0.00	14	35.3	2.52
17	2	4.0	2.00	17	44.0	2.59
18	0	0.0	0.00	5	12.2	2 44
19	1	2.2	2.20	4	7.9	1.98
20	0	0.0	0.00	1	1.7	1.70

The urea curves and the safranin curves show most striking resemblances; both commence during the first year of life at points far below the average, both rise rapidly at first, more slowly afterwards, and both reach their maximum in the fourth year of life. In both the curve of the boys rises above that of the girls and stays above until the age of puberty, the curves crossing at 12 years for urea and at 11 years for safranin. It would seem that the number of urinalyses is sufficient to eliminate chance errors and to indicate that these showings are real. The acidity curve follows much the same course as the other two, but is more broken. Many of these patients were given alkalies freely and the acidity curve has been therefore much interferred with, and it is not surprising that it is more irregular than the other two. Moreover, acidity is a very complex resultant. Its general similarity to the others, notwithstanding the interference with it, adds great weight to the accuracy of the other two curves.

The ratios have been computed for each year between the average so-called "percentage of urea" for the year and the normal safranin index for the year, the urea in each case being considered as 1. Similar ratios have *been computed between the normal* percentages of urea and the acidity indices, the urea again being expressed as 1. These ratios are given in Table 4 and graphically shown in Chart 2.

TABLE 4.

	Ratio Urea Per Cent., to Safranin Index.		Ratio Urea Per Cent., to Acidity Index.	
Age.	Males.	Females.	Males.	Females.
0	1.31	1.11	2.69	2.59
1	0.98	0.88	2.12	2.13
2	1.05	0.94	2.07	1.93
3	0.97	1.03	1.87	1.93
4	1.02	0.95	1.92	1.75
5	0.89	0.82	1.83	1.75
6	0.85	0.75	1.76	1.67
7	0.86	0.85	1.74	1.86
8	0.84	0.73	1.51	2.19
9	0.92	0.81	1.82	2.15
10	0.83	0.72	1.71	2.45
11	0.84	0.95	1.79	1.61
12	0.79	0.92	1.51	1.63
13	0.70	1.01	1.38	1.66

The curve of the urea-safranin ratio is divisible into *four sections.* The *first section* comprises the first year only; the second section comprises years 1 to 4 inclusive; the third section comprises the years 5 to 11 inclusive for boys, and 5 to 10 for girls; the fourth section comprises years 12 and 13 for boys and 11 to 13 inclusive for girls. The curves are not *plotted beyond* 13 years because paucity of numbers makes their accuracy doubtful beyond *this point.* The first three sections are similar in the two sexes. In the first section the ratio is high, being 1.31 for boys and 1.11 for girls. One of the baby boys had a safranin index of 12. If this case should be thrown out entirely the ratio would still be 1.14. On the other hand, many of the safranin indices of urines belonging to the first year of life are recorded *as zero, which would have been recorded as fractional* parts of unity had fractional parts of a c.c. of the safranin solution been used in their determination. So that the average indices as recorded can not be far from the truth even with the one unusual index counted in.

In the second section of this curve the line is nearly horizontal and very close to unity, its average being *1.005 for the boys and 0.95 for the girls.* The third section drops to a lower level and maintains it throughout the whole section, the average ratios of the section being 0.86 for boys and 0.78 for girls. The fourth section drops to a still lower level for boys, viz., 0.75, but rises with the girls to 0.96. These curves bring strongly to mind the curves of the annual percentages of growth *and development in stature, height sitting, weight,* endurance, grip and lung capacity, which show a pubescent exaltation with a prepubescent diminution of rate of growth. The low ratio at 10 years in girls, 0.72, followed by the high ratio, 0.96, is very suggestive of the above mentioned peculiarity. These ratios represent the relative proportions of the saccharin and urea elements in the metabolism. They show that in infancy the saccharin element, although absolutely low, is relatively high, but gradually diminishes as the age of the child increases, to again show an exacerbation at puberty. These ratios are also serviceable in assisting in the determination of the significance of single samples of urine. It not infrequently happens that in a given sample of urine the *urea percentage, safranin index and acidity* index will all run high. If, however, their ratios to each other be approximately normal, it shows that the urine is concentrated, but not necessarily toxic, yet, nevertheless, even in such instances one always suspects, at least, *that the small volume* of urine is not carrying away all that it should.

The safranin index varies considerably *from day to* day. This is very well illustrated in the case of Lewis G., of whose urine 74 examinations were made. The safranin indices in these examinations are shown graphically in Chart 3, which is made after the manner of a temperature chart. Time intervals are not proportionately shown on this chart, but the date of each examination is given. The characteristic of this chart is its irregularity, extensive changes occurring even from day to day. The chart shows very clearly that caution must be used in drawing conclusions from a single urinalysis—this may be very far from the average safranin index of the individual. Chart 3 also shows Lewis G.'s urea percentage and his acidity index for each day that the safranin index is recorded. The relations between the three and their (in a large fraction of the chart) daily variations are shown. In general, safranin and acidity accompany each other. Occasionally a high acidity will be found to precede a high safranin by a day, and begin to drop the same day that the safranin index reaches its maximum. In general a high safranin does not last more than two or three days; high acidity not infrequently persists longer, and may occur independently of the safranin reaction. High safranin very rarely occurs independently of high acidity. I have not always made copper tests of the urine, but in general it may be accepted that a urine which has a safranin index of 5 will show sugar by a copper test. In a general way the urea rises and falls with the acidity and safranin indices.

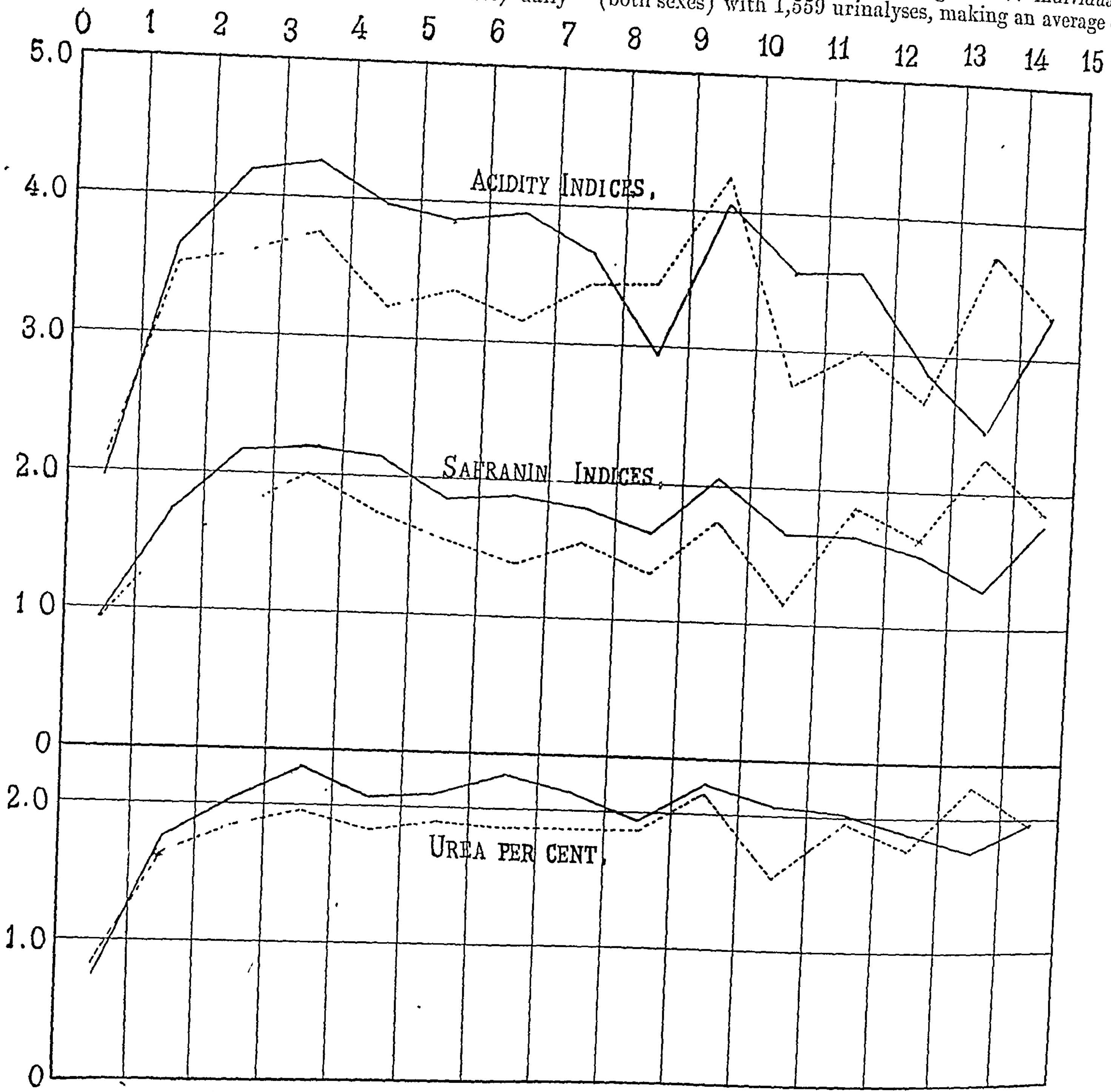

Chart 1.—Normal urea, safranin and acidity curves. Solid line, boys; dotted line, girls.

To determine the minimum number of observations necessary to establish with some degree of significance the average safranin index of an individual, the following study of these urinalyses was made. A list was made of all individuals under 21 of whose urine 10 or more examinations were made, also of the number of examinations of each, and of the average safranin index of each individual. There were altogether 77 individuals (both sexes) with 1,559 urinalyses, making an average of 20.3 examinations for each. The average of all their safranin indices was 1.82. The average safranin index of all urines examined, adults excluded but including Lewis G. and Ralph W., was 1.81. Of the 77 individuals 11 had exactly 10 urinalyses and the average safranin index of these 11 was found to be 1.81. This would indicate that for a given individual not less than 10 examinations should be made to determine his average safranin index. Of the 77 individuals with 10 or more examinations, 11 had an average safranin index between 2 and 2.5; 11 had an average index between 2.5 and 3:

with 2 the average index was between 3 and 3.5, and with 4 it was 3.5 or more, the maximum being that of Lewis G., 3.92.

From a consideration of these facts it would seem justifiable to say that a child who has an average safranin index of 2 or more, based on not less than 10 urinalyses, is of a saccharin diathesis. Of the 77 children in my list, meeting the preliminary requirements, 28, or roughly one-third, would be classed as having such saccharin diathesis. Of these 28, 20 were boys and only 8 girls. The term diathesis is one which has been used so loosely and in so many senses, that it is, possibly, an unfortunate one to use here. It is used here in the sense of a type of chemism of the individual, and since its presence or absence in any given child can be determined positively, there is no lack of definiteness to the term as here employed.

A negative result of the safranin test, or, in other words, a safranin index of 0, is most commonly found in the earlier years, and more often in girls than in boys. The number of negative results could have been materially reduced had the safranin solution been used in smaller quantities than 1 c.c. in these tests. The distribution of these negative results by age and sex is given in Table 5.

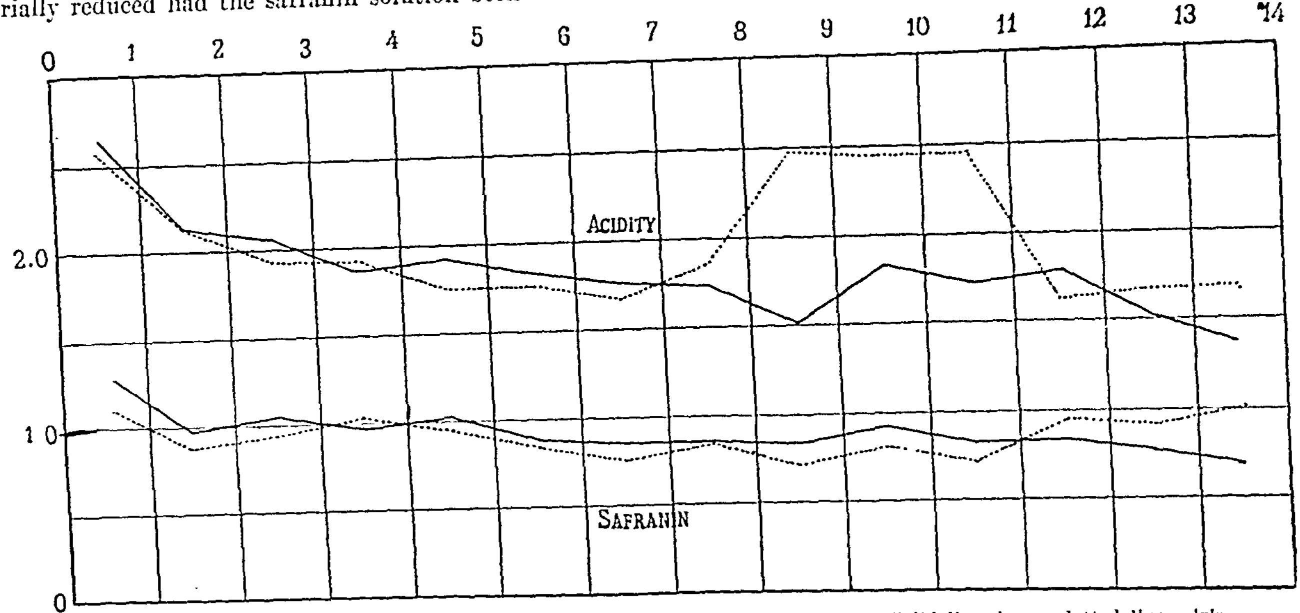

Chart 2.—Ratios of safranin and acidity to urea (urea being considered as 1.0). Solid line, boys; dotted line, girls.

TABLE 5.—PERCENTAGE OF SAFRANIN EXAMINATIONS GIVING NEGATIVE RESULTS OR A SAFRANIN INDEX OF ZERO.

Age.	Males. Per Cent.	Females. Per Cent.
0	43.6	34.3
1	12.4	19.1
2	4.6	13.6
3	5.2	11.2
4	7.8	8.3
5	4.2	8.9
6	6.1	12.8
7	4.6	15.0
8	8.1	19.4
9	6.3	4.6
10	9.0	23.3
11	5.4	7.8
12	11.4	0.0
13	16.7	0.0
14	12.5	0.0
15	0.0	0.0
16	0.0	7.1
17	0.0	0.0
18	0.0	0.0
19	0.0	0.0
20	0.0	0.0
Average	9.2	12.8

Crismer seems to have adopted a safranin index of 5 as the minimum for showing sugar of clinical importance. Allen also says that "if more than four or five measures (of safranin solution to 1 of urine) is required the urine is distinctly diabetic." I also agree that a safranin index of 5 is about the limit of the copper test. I have therefore collected from my examinations all those showing a safranin index of 5 or more. There were 137 in all, or roughly, 4 per cent. of the 3,481 examinations made of children's urine. Table 6 shows for each index from 5 up, the number of urines showing that index.

TABLE 6.—EXAMINATIONS GIVING HIGH SAFRANIN INDEX.

Index.	No.	Total.	Index.	No.	Total.
5	44	220.0	8	8	64.0
5½	18	99.0	8½	1	8.5
6	33	198.0	9	1	9.0
6½	7	45.5	10	4	40.0
7	16	112.0	10½	1	10.5
7½	2	15.0	12	2	24.0
				137	815.5
Average Index				6.17	

The highest safranin index found in all my examinations was 12, and this, as shown in Table 6, occurred but twice, once in the urine of Lewis G. and once, strange to say, in the urine of Franklin P., who at the time was just 14 days old, and suffering from one of the autotoxic or septic conditions of the new-born.

After reaching the foregoing results it seemed that they were of sufficient importance to warrant a more critical inquiry into the chemical significance of the safranin reaction. It was known that safranin was decolorized by glucose and not by uric acid nor by creatinin, the two great reducing agents found in normal urine. The presence of the so-called "physiologic sugar" in normal urine is also generally accepted. It was therefore probable that the safranin reaction in urine was due to sugar and sugar only. On the other hand, two samples of urine (tested after the formulation of the foregoing tables) and having safranin indices of 10 and 13 respectively, were found by Dr. Max Herzog to give no reaction to Fehling's test nor to the phenyl hydrazin test.

I then carried on a line of experiments in the laboratory of Dr. Julius H. Eichberg of Cincinnati, and in conjunction with him, from which the following was found:

1. A solution of glucose in water of the strength of 1 to 1,000,000 (one to one million) will reduce Fehling's solution with the precipitation of cuprous oxid.

2. A solution of glucose in water of the strength of 1 to 2,500 does not discharge the color of safranin. In

making this test there were used 1 c.c. each of the glucose solution, normal sodium hydrate solution and the 0.1 per cent. solution of safranin.

3. A fresh urine, having a safranin index of 2½, was used in making a solution of the following strength: Anhydrous glucose, 1 gram; urine, fresh, 100 c.c.; water, 24,900 c.c. This solution reduced Fehling's reagent with deposit of cuprous oxid, but was negative to safranin.

4. A 1 to 1,000 solution of glucose in a urine having a safranin index of 2½ before the addition of the glucose, gave a safranin index of 5. This same solution failed to reduce Fehling's reagent. A solution of glucose of 1 to 500 in the same urine also failed to reduce Fehling's test. A solution of glucose of 1 to 250 in this same urine gave Fehling's reaction, and when it was diluted to 1 to 500 by the addition of water it again gave Fehling's reaction.

From the foregoing it is evident that while Fehling's reagent is a much more delicate test than safranin for sugar when in solution in water only, it is less delicate than safranin when applied to urine. It would further seem, from some of my experiments, that the conditions in urine which inhibit or otherwise interfere with the Fehling's reaction are variable so that no definite line can be fixed quantitatively as to the relative delicacy of the safranin and copper tests in the detection of sugar in urine.

5. A watery emulsion of commercial compressed yeast reduced Fehling's reagent with a trace of Cu_2O (a dextrin reaction), but failed to discharge the color of safranin.

6. A diabetic urine having a safranin index of 20 was found by fermentation to contain 1⅞ per cent. of sugar. After 24 hours' fermentation it was filtered and then showed no reaction to Fehling's test, but gave a safranin index of 1½. After standing another 24 hours, with yeast in it, it failed to react to safranin.

7. Another diabetic urine, whose safranin index was determined as high as 15, but whose complete safranin index was not determined, but which by fermentation showed a percentage of sugar greater than 2, also failed to give the safranin reaction after two days' fermentation.

The final safranin tests in the above diabetic urine were made by using 1 c.c. each of the urine, the sodium hydrate and the safranin solution, conditions under which slight changes of color might not be noticeable.

The results of these fermentation tests at once suggested that an effort be made to ferment out with yeast the safranin reducing substance in normal urine. Accordingly a series of five non-diabetic urines was taken, their safranin indices determined when freshly passed, after which each was mixed with yeast and kept at a suitable temperature and the safranin indices determined from day to day. The results are shown in Table 7. The test was the same as that previously used, excepting that the safranin solution was measured in tenths of a c.c.

Table 7.—Changes Produced by Yeast in the Safranin Indices of Normal Urines.

Urine.	When Fresh.	After One Day.	After Two Days.	After Three Days.	After Four Days.
1	2.5	0.8	0.4	0.25	0.15
2	1.0	0.2	Trace	0.0	....
3	3.0	1.2	0.3	0.12	....
4	2.5	1.0	0.8	0.4	....
5	2.5	1.5	0.7	0.3	....

From these results it may be concluded that the safranin reducing body in urine gradually disappears in the presence of yeast, making it highly probable that safranin indicates only sugar, or one of its congeners.

These experiments put the safranin test for sugar in urine on a very high plane. It is decidedly more reliable than Fehling's test in both its positive and negative showings. If a safranin index of 5 be taken as the

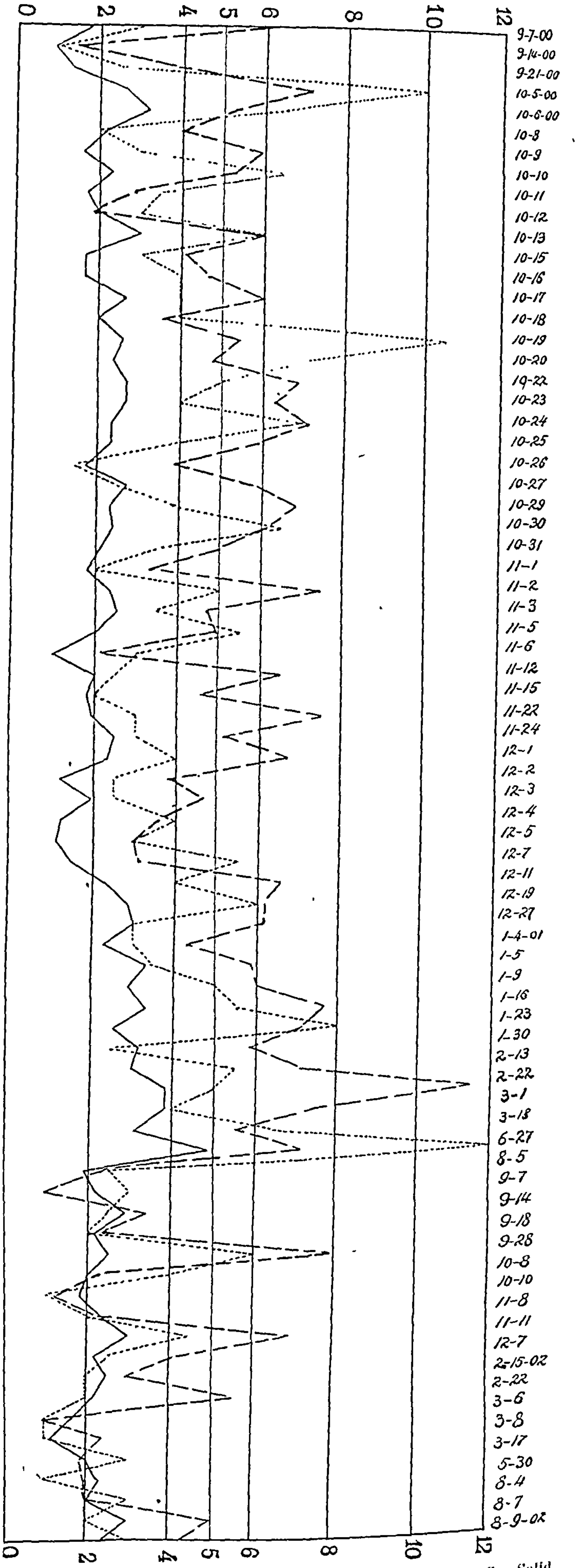

Chart 3.—Safranin, acidity and urea curves of Lewis G. Solid line, urea; dotted line, safranin; broken line, acidity.

normal limit of the copper test, then some urines which contain that much sugar would be overlooked if the Fehling's test alone were employed. It is evident that glycosuria of such degree is more common in the urine of children than has heretofore been supposed, the foregoing tables showing that it occurred in approximately 4 per cent. of the urines examined.

I regret that I have had no opportunity of determining the reaction of safranin to glycuronic acid.

In a subsequent communication I shall present the clinical features of the saccharin diathesis.

In conclusion the following summary is offered:

1. Safranin is a reliable and convenient test agent for sugar in urine. It is sufficiently delicate to show the variations in the so-called "physiologic sugar" in urine.

2. Safranin is decolorized by sugar, but not by uric acid, creatin, creatinin, chloral, chloroform, hydrogen peroxid, albumin (except slowly), morphia or rhubarb.

3. The safranin index is the number of c.c. of a 0.1 per cent. aqueous solution of safranin, decolorized by 1 c.c. of urine.

4. The normal safranin index is low during the first year of life, but gradually increases, reaching its maximum between 3 and 4 years of age, after which it slowly decreases for a number of years, but never becomes so low as during the first year.

5. During the first ten years of life boys have a safranin index constantly higher than that of girls.

6. At 11 years of age the safranin index curves of the two sexes cross, the girls becoming superior. This is probably a pubescent phenomenon.

7. The curves of average urea percentages, by ages and sexes, closely resemble the corresponding safranin curves, being low during the first year, rising to their maxima at three years, descending slowly thereafter, with the boys superior to the girls from birth to puberty, and then the girls superior.

8. The curves of the acidity indices resemble in a general way those of urea and safranin.

9. The ratios between the average urea percentages and the safranin indices show the relative amount of physiologic sugar excreted to a given amount of urea. The excretion of physiologic sugar is relatively high during the first year of life, lower during the next four years, and still lower during the next 6 or 7 years. At puberty there is a relative increase in the excretion of physiologic sugar in girls. The data are lacking to determine whether this is true in boys.

10. The ratios between the average urea percentages and the acidity indices show considerable irregularity, which is probably fortuitous. On the average the ratio is about 1:2.

11. Urine with a safranin index of 5 will generally show sugar by the copper test.

12. The safranin and acidity indices vary greatly from day to day. In general the safranin and acidity accompany each other. Occasionally high acidity precedes high safranin by a day. In general high safranin does not last more than two or three days. High acidity not infrequently persists longer and may occur independently of a high reaction. High safranin rarely appears independently of high acidity.

13. The average safranin index of all children's urines examined (3,481 in all) was 1.81.

14. Ten is the minimum number of urinalyses necessary to determine the average safranin index of a child.

15. A child whose average safranin index (founded on not less than 10 examinations) is 2 or more, may be said to be of the saccharin diathesis.

16. The saccharin diathesis was present in about one-third of the children whose urines were examined a sufficient number of times to formulate their average safranin index.

DISCUSSION.

DR. A. C. CROFTAN, Chicago—I see only one objection from a chemical point of view to the experiments reported, and this possible objection Dr. Christopher mentions himself, viz.: that he has not absolutely determined whether or not certain urinary ingredients other than sugar that occur in small quantities in every normal urine do not also give the safranin reaction. I refer in particular to glycuronic acid; this body, as we know, appears in considerable quantities in the form of compound glycuronates whenever intestinal putrefaction is excessive, and as extensive reduction of safranin by urine is seen in cases particularly that present autotoxic symptoms, it is possible that glycuronic acid may in part be made responsible for the reaction. This point can readily be determined, and Dr. Christopher informs me that he is at present engaged in investigating this simple problem. Even should it be found that glycuronic acid also produces the safranin reaction and not glucose alone, the results reported would be rendered in no wise less valuable for glycuronic acid is closely related to glucose—in fact, Dr. Christopher speaks expressly of "sugar or one of its congeners."

Dr. Christopher has collected an enormous mass of material in children so that the conclusions he draws from his analytical data necessarily carry much weight. The fact that the figures in adults as supplied by Dr. Favill are so much lower than those found in children demonstrates clearly to my mind that the drop in the safranin index, i. e., the decrease in the sugar excretion, is a pubescent phenomenon. Persistence of a high safranin index after puberty might fitly, therefore, be regarded as an arrest of development and an abnormally high safranin index in the later years of childhood as an indication of the saccharin diathesis in Dr. Christopher's sense. The practical importance of this finding can not be underestimated, for it should teach us above all to be on our guard for the development of metabolic disorders, particularly diabetes, in children or adolescents showing a high reaction.

The peculiar relations shown by Dr. Christopher to exist between the safranin index curves, the average urea percentages and the acidity indices of the urine in boys and girls, and the differences demonstrated in the two sexes disclose highly interesting relations that, for the present, however, are difficult to interpret. Dr. Christopher has refrained in his communication from drawing any clinical conclusions from his figures, and I am interested to know what his ideas on this part of the subject are; I hope we may look forward before long to a clinical interpretation of his laboratory findings. Studies of this character are very important, and it is earnestly to be hoped that clinical laboratory investigations such as those Dr Christopher has carried out will stimulate similar researches by others who have a large clinical material at their disposal, but who have hitherto allowed their material to go to waste, or have contented themselves with formulating stale casuistic statistics that are merely a repetition of what has been done a thousand times before. We are just beginning to understand the finer mechanism of the nutritional disorders, so-called, and the sooner clinicians begin to gather material that can form the basis of definite conclusions in this direction the better.

Not the least important part of Dr. Christopher's contribution are his discoveries in regard to the Fehling reaction as compared to the safranin reaction for sugar in the urine. He has shown, I believe, conclusively, that certain serious objections can be made against the employment of the popular Fehling cupric reducing test and that serious errors can creep in when performing this test that may render it altogether unreliable under certain condidtions. The urine, it appears from Dr. Christopher's experiments, may sometimes contain bodies in solution that can inhibit the Fehling reaction. This is a very valuable discovery. The safranin test, we are told, is much more reliable than the Fehling test, for it often indicates sugar (or its congeners) in the urine when Fehling fails. As the safranin test, as formulated by Dr. Christopher, is, moreover, more simple of execution than the Fehling test (properly performed!), and as the end reaction is more easy to read, the safranin reaction for sugar promises, thanks to the labors of the author of this paper, to become a valuable adjuvant to our clinical armamentarium.

Dr. W. F. Boggess, Louisville, Ky.—I have been struck with the frequency with which the ordinary sugar tests respond in children, but I recognize the fact that has just been stated, that this often arises from intestinal putrefaction or from metabolic changes. The conclusions are certainly very interesting, and I am sure we shall all await with much pleasure his supplemental report. When one considers the immense amount of sugar commonly ingested by children one should not be surprised at the frequency with which the sugar reaction is obtained. The charts showing the relation of urea, acidity and the safranin reaction up to the time of puberty are certainly very suggestive, and may give a new insight into the metabolic phenomena of early life.

CAPILLARY BRONCHITIS.*

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The tendency of the bronchitis which involves the smaller bronchi to invade the air cells, thus producing a pneumonia, has only recently been generally recognized, but with this more exact knowledge of the pathology of bronchopneumonia the profession has come to look on the accompanying pneumonia as the important condition to be treated. Yet all will agree that in many cases pneumonia is the lesser factor and that the bronchial mucous membrane, with its outpour of mucus into the smallest bronchioles, constitutes the real danger to the child. The older writers called attention to this condition under the designation "capillary bronchitis," an expression which, unfortunately, has fallen into innocuous desuetude, for no other term conveys exactly the same impression to us.

It is the extent of the involvement rather than any pathologic difference that makes capillary bronchitis more to be feared than even catarrhal or croupous pneumonia.

The natural tendency of inflammations of the mucous membranes of the air passages is toward extension by continuity of structure, beginning, possibly, as an acute coryza, followed by a laryngitis, to be succeeded by a more or less deep bronchitis. When bronchitis attacks the larger bronchial tubes, the inflammation is limited mainly to the mucous membrane and in its extension is confined usually to the mucous layer. As the bronchi become smaller the histologic elements of the bronchial wall become fewer in number; the mucous membrane changes from a ciliated columnar epithelium into a flat pavement membrane; the internal fibrous layer disappears; the non-striated muscular layer becomes thinner; the external fibrous layer loses its muciparous glands and its cartilaginous plaques and, in fact, is continuous with the interstitial connective tissue of the lung proper, its cells forming here part of the bronchiole wall and there part of the wall of an air cell. Now, when bronchitis has extended into the smallest and terminal bronchioles, the inflammation no longer remains limited to the mucous membrane, but involves also the muscular and external fibrous coats, thus piercing, so to speak, through the wall of the bronchiole into the adjacent air cell and causing a bronchopneumonia. When the temperature of a child that has been suffering from bronchitis jumps up from 101 to 104 F., when the respiration has increased to 60 or 80 per minute, and the pulse is greatly accelerated, even the tyro in medicine knows that he has no longer to deal with a bronchitis, but with a pneumonia. The clinical picture of bronchopneumonia is familiar to all of us, and I will not detain you with rehearsing the ordinary course of such a case, with the two weeks of fever, the liability to extensions and recrudescences, the exhaustion, etc.

But when the inflammation, instead of penetrating deeply into the air cells, spreads widely and involves a number of the bronchioles with their adjacent air cells at the same time, symptoms of an alarming interference with respiration rapidly develop, and dyspnea and cyanosis call urgently for relief and the time of probation is brief. The onset of this condition is easily recognized. The child has had a bronchitis which has gradually involved smaller and smaller bronchioles. The râles become finer and finer and shrill sibilant râles may be heard over most of the posterior surface of the lungs. The breathing becomes more and more labored from the difficulty in forcing air through the narrowed tubes. When secretion has been established there is still greater difficulty in getting air through bronchioles filled with mucus. Respiration becomes more and more embarrassed, the child rolling about the bed and restlessly struggling for breath, its color becoming darker, the nose and ears cold, until death soon closes the scene. The lungs are drowned in their own secretion. This is a different picture from that which obtains in bronchopneumonia. There it is exhaustion from high temperature, rapid respiration, and increased work of the lungs and the right heart. Here it is the struggle for air, the labored breathing, the cyanosis and dyspnea.

TREATMENT OF FIRST STAGE.

There are two stages in capillary bronchitis, using the term in the above sense, the symptoms and treatment of which are radically different. The first stage is characterized by lack of secretion and by dyspnea, which is due to several causes. As a result of the inflammation of the mucous membrane there is marked congestion, so that the lumen of the smallest tube is thereby considerably lessened and the breathing interfered with. Another important factor is the spasm of the muscular layer induced by the inflammation which is contiguous to it and which also tends to attack the muscular fibers themselves. Analogous conditions are seen in the narrowing of the anterior nares in acute coryza and in the spasm of the glottis in acute laryngitis. The inflammation of the mucous membrane at first also checks the secretion of the muciparous glands and the natural moisture of the mucous surface. In fact, attention is usually directed to this dryness in selecting the medication instead of considering also the other factors which are really of more importance.

Congestion, spasm and dryness being the factors present in the case, the usual empiric treatment is founded on a rational therapeusis. The inhalation of steam or steam impregnated with various aromatic substances tends to allay spasm and alleviates the dryness. Hot applications, baths and counter irritation serve as derivatives. Hot whisky relaxes spasm. Nitroglycerin in small doses frequently repeated dilates the bronchioles. Atropin or belladonna, by its sedative action on the reflexes, relieves the urgent dyspnea and, at the same time, stimulates the circulation and respiration. Ipecac not only relaxes the spasm but increases the secretion.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

TREATMENT OF SECOND STAGE.

The second stage, on the contrary, is characterized by the increased secretion of mucus and epithelial cells which is poured out some forty hours later into the smaller bronchioles, thus filling up their lumen. It will be recognized by the change from the dry sibilant to the fine, moist, subcrepitant râle. The mucous lining of the capillary bronchioles is made up of flat pavement instead of ciliated columnar cells, so that the secretion is removable only by deep inspiration and cough or by rhythmic contractions of the circular muscular fibers in the walls of the bronchioles. This muscular effort is greatly hampered by the inflammation present there, by the weakened muscular tissue and by the peribronchial and alveolar congestion and inflammation.

The inspiration and the expulsive efforts of coughing are largely inadequate because of the difficulty in getting air through and behind the mucus; to this must be added the general feebleness and inefficiency of the skeletal and thoracic muscles, the softness and plasticity of the bones and the ignorance of the child as how best to co-ordinate its expulsive efforts. Finally, the excessive amount of mucin in the tissues of the child makes the secretion of mucus into the tubes relatively greater than in the adult. From this excessive secretion comes the chief danger of the second stage. For in listening to the chest sounds in such cases one hears the labored breathing of the child as it tries to respire through a column of liquid which fills up the large bronchi and extends into their minutest ramifications. The problem at this stage is how to get air into the lungs and how to remove the quantity of mucus. The two phases of the problem are practically correlative. The mucus may be mechanically removed by emesis, and for this ipecac is probably the surest and safest agent, for it liquefies the mucus and thus renders its expulsion easier and it is not so depressing as certain other emetics. Thomson objects to ipecac on the ground that it tends to increase the secretion of mucus in the tubes even while it is removing by the vomiting that which is already present, and advises instead of it the use of turpeth mineral or other irritant emetic. The objection to the irritant emetics is the liability to increase the irritation of the gastric mucosa which always accompanies the catarrhal condition and which results from the swallowing of the mucus that is coughed up, and, further, the beneficial action of any ipecac that is retained on the hepatic cells is distinctly of advantage. During the vomiting, or even during the coughing spells, the head of the child should be lower than the body, so as to get the effect of gravity in removing the secretion from the lungs. Emesis is, however, a great strain on the children weakened by such a serious disease, so that the physician should exercise great professional discretion in its use and should stay with the child to guard against too great depression. It should not be practiced oftener than two or three times in the twenty-four hours.

As noted above, the contraction of the circular muscle fibers in the bronchioles squeezes out the mucus into the larger bronchi, where it can be carried away by the ciliated epithelium. The expulsion of the mucus will be favored by any agent which will improve the tone of the muscular coat. Strychnin is the best drug for this purpose, as, in addition to its other good qualities, it increases the reflexes and so favors cough, but it should be administered frequently in small doses and almost to the tetanizing point. Opium, on the other hand, lessens the reflexes, quiets the muscular activity and thus stupifies a child into its last sleep. It is a most dangerous drug in bronchitis in children.

Undoubtedly any drugs which liquefy mucus will facilitate its removal, but, unfortunately, such drugs, with the exception of chloral, also increase the amount of mucus. Usually, however, after the secretion is established, it is not very viscid or very difficult of expulsion. The chief danger comes from its quantity, from the blocking up of many minute bronchioles and the consequent development of atelectasis to a larger or smaller extent. To lessen the secretion and to prevent that atelectasis no drug equals belladonna or its alkaloid, atropin, which stimulates respiration and circulation, while it dries up the secretion. There can be no objection to the administration of strychnin and atropin at the same time, for, although atropin diminishes reflexes, yet its first effect is on the secretions, and the strychnin has its most marked action in stimulating the reflexes. Other agents, such as oxygen by inhalation, stimulants and such details as the cotton-batting jacket, attention to the stomach and the intestinal canal, the hygiene of the nursery, etc., do not require extended notice.

An important phase of our subject is the prevention of the involvement of the capillary bronchioles by proper medication of the bronchitis in its incipient stages. The discussion, which will be brief, must be on the best methods of treating inflammations of the bronchial mucous membrane and, incidentally, of preventing the extension of that inflammation. There are certain phenomena to be observed in inflammations, the reasons for which have not been wrested from Nature. With the onset of inflammation one finds congestion and enlargement of the capillaries, slowing of the circulation and finally stasis, the white blood cells becoming attached to the wall of the blood vessel and finally working their way into the surrounding tissue, often followed by red blood cells, with a coincident outsoaking of the liquid elements of the blood. This change in the circulation and nutrition of the local cells affects their vitality disastrously and they soon die and are cast off from their attachments. In the evenly balanced condition of the vasomotor system this local dilatation of the blood vessels, with engorgement of blood, will be met by vasomotor spasm of remote vessels, as shown by cold hands and feet, tense radial artery, etc. Aconite has a more desirable action on inflammatory congestions than any other drug. It quiets the excited action of the heart, relaxing arterial spasm and thus equalizing the circulation and withdrawing blood from the congested area. The force and rapidity of the heart beat is lessened and the blood current slowed. Under its use the radial artery will be relaxed and the pulse made soft. In congestions of the pulmonary tissues aconite will, by its effect on the systemic circulation, lessen the amount of blood going to the inflamed area and thus jugulate inflammation. It tends to prevent the extension of the inflammation along the mucous membrane.

Veratrum viride is practically a congener of aconite, but safer in its action. The late Dr. Larrabee used to teach that veratrum viride would bleed into the splanchnic blood vessels.

The depressing action of either or both on the heart can be obviated by combining with them digitalis, whose antiphlogistic powers have long been recognized. Digitalis contracts the arteries and thus prevents the stasis in the capillaries and the diapedesis of the white blood corpuscles. Professor Hare has called attention recently to the mutually helpful action of aconite and digitalis in certain phases of heart trouble. The combination of these drugs, with or without strychnin, will dissipate the congestion, prevent extension of the inflammation and shorten the attack of bronchitis. By using the active principles of the plants, greater accuracy of dosage and certainty of effect are secured. With such agents one is combating the inflammatory process, and certainly their employment is more rational than the administration of expectorants to start the secretion and then opium and other drugs to stop it. When they are used intelligently the long continuance of the catarrhal trouble and the administration of all the host of expectorants will be largely obviated.

Under the best treatment the mortality of capillary bronchitis will always be high, so the prognosis is invariably grave.

The ultimate results of the prolonged inflammation of the bronchial and peribronchial tissues and the changes in the surrounding alveolar tissue are of great interest, but their discussion would prolong the paper to an unjustifiable length.

760 Second Street.

MANAGEMENT OF CATARRHAL PNEUMONIA IN INFANTS.*

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NEW YORK.

Catarrhal pneumonia, on account of its large mortality and because of its frequent appearance as a complication in almost every disease of infancy, is one of the most formidable ailments which we are called on to treat.

The disease is usually described as primary and secondary. Among the several hundred cases which have come under the writer's observation comparatively few were primary, not 5 per cent. Those described as primary usually follow a bronchitis, often a neglected bronchitis. The disease varies considerably as regards its severity, depending on the age and condition of the child, the nature of the infection and the amount of lung involved. It occurs with its greatest fatality when associated with diphtheria and measles.

Catarrhal pneumonia demands the best attention we can give it, not only on account of the delicate organ attacked, enclosed in weak thoracic walls, but because, unlike lobar pneumonia, scarlet fever, typhoid fever and many other diseases of early life, there is no self-limitation, no cycle. In these diseases we are only required to assist a patient through the various stages; in catarrhal pneumonia we must do more—here we are asked to cure.

Every child at the commencement of illness has a definite resistance with which to withstand the disease. In catarrhal pneumonia, for the reasons just given, it must be our effort to preserve every strength unit which the child possesses. An immense amount of vitality is wasted in sick children because of irritability, restlessness and loss of sleep. One of the first duties in a given case is not to give this or that drug, or use this or that local application, but to make the child comfortable—to put it in the best position to withstand disease. We must establish a sick-room régime which will make this possible.

FRESH AIR.

The value of a constant supply of fresh air is too little appreciated. There should be a direct communication with out of doors in every case throughout the attack.

VENTILATION.

Various means of ventilation have been devised. A very cheap and effective one is the window board, which anyone can make. The board is placed under the lower sash, between it and the window sill. I usually order it to be four inches wide. This brings the sash apart and allows the entrance of a free current of air, which is directed upward. If plenty of fresh air at a proper temperature were available during the early part of the illness, there would be much less use for oxygen later on.

An absolute necessity in a sick room is a good thermometer. In pneumonia cases this thermometer must never register above 70 F.

CLOTHING.

There is a marked tendency to coddle, to wrap, to overclothe pneumonia patients. The patient requires during the winter absolutely nothing more than a medium weight flannel shirt, the band, if one is worn, and the usual night dress. I have, some years since, discarded the oiled silk jacket. It is cumbersome, it is impossible to keep clean, and it overheats the patient

Given an infant with catarrhal pneumonia, have him heavily clad, keep him in an unventilated, overheated room, in close contact with an adult body, and you have a patient who is tremendously handicapped. There is but one place for a sick infant and that is in his roomy crib.

FOOD.

In every illness with fever, the digestive capacity is considerably reduced. If the usual milk diet is continued, we are very liable to have a gastrointestinal infection added, oftentimes as a serious complication to the existing disease. In the breast-fed, a drink of water is ordered for the child before the nursings and between the nursings. The nursing hours should be the same as in health, but the time allowed for each nursing should be reduced from one-third to one-half.

In the bottle-fed, the milk strength should be reduced from one-third to one-half by dilution with water, so that the quantity given remains the same. Runabout children, those from 2 to 4 years of age, are put on a diet of diluted milk, gruels and broths.

Normal bowel function is more necessary for the sick than for the well. There should be at least one stool in twenty-four hours.

REST.

Having placed the child under the best dietetic and hygienic influences, we are in a position to use medication to a much greater advantage. In using medication and in performing the various offices, it must be our effort to disturb the child as little as possible. In our anxiety to do we are very liable to overdo, and, often I regret, do harm. If a well child were given syrup expectorants, stimulants, baths and local applications, something done every hour or two in the twenty-four, he would have to be a strong child in order not to be made ill. We should treat our ill with more consideration. Make the interval that the child is to be disturbed at night as long as possible by performing the various offices at one awakening. Thus, at one awakening, the child can be given food, medicine and local treatment applied. I always endeavor to make the interval three hours when possible.

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STEAM INHALATIONS.

Among the distinctly remedial measures, aside from those administered internally, steam inhalations with creosotes deserve an important place. The patient is placed in its crib, which is covered and draped with sheets so as to make a fairly tight enclosed space. The apparatus necessary is an ordinary croup kettle. Ten drops of creosote is added to one quart of water and placed in the kettle. The nozzle of the kettle is introduced between the sheets at a safe distance from the child's face and hands, the steaming being carried on for thirty minutes every three hours. The sheets should be parted slightly about every ten minutes so as to allow a renewal of the air. The inhalations are to be given both sleeping and waking. As a patient improves, the inhalations may be given at less frequent intervals until normal respirations and the chest signs tell us that it is no longer required. Steam inhalations in bronchitis and in catarrhal pneumonia are so well thought of by Dr. L. Emmett Holt that he had built in the new Babies' Hospital a special steaming room.

COUNTER-IRRITATION.

The application of counter-irritants to the skin over the thorax is, to the author's mind, a means of much service in cases in which there is a great deal of bronchial catarrh, which covers, of course, most cases. In order that a counter-irritant be of service, a distinct red blush must be produced on the skin. Turpentine diluted with oil, one-third turpentine and two-thirds oil, when briskly rubbed on the parts for a few minutes produces a fairly satisfactory counter-irritation. The old-fashioned home-made mustard plaster has answered best as a counter-irritant in my hands.

Written directions are always given for the preparation of the plaster, and the boundaries of the area of skin to be covered are indicated by pencil marks on the skin's surface. If the nurse or mother is simply told to put a mustard plaster on the chest, a plaster the size of a man's hand will usually be placed somewhere between the umbilicus and the chin. For the first two or three applications, one part of mustard to two parts of flour is used. This is moistened with water and made in the consistency of a rather thin paste. The paste is then spread on cheesecloth, old muslin or linen, which has been cut to the desired size. The plaster is readily held in position by a bandage of any thin material extending around the thorax. When the skin is well reddened, usually within five to fifteen minutes, the plaster is removed and vaselin or sweet oil applied. I never use a plaster oftener than once in six hours and then only in the severest cases. Ordinarily, two or three applications in twenty-four hours answer. If the plasters are continued for several days, it will be necessary to make them much weaker after a day or two in order to avoid blistering—one part of mustard to five or ten of flour. The counter-irritation is particularly effective when applied early at the commencement of the attack.

HOT MUSTARD BATH.

In cases of sudden onset, with high fever, rapid breathing and cold extremities, a mustard bath—one tablespoonful of mustard to six gallons of water, 100 F. —will often furnish marked relief to the immediate symptoms. Autopsies of these cases show a general congestion of the internal organs, with intense congestion of the lungs. The bath may be repeated at six-hour intervals. This type of case is usually very rapid in its development—the child is relieved or dead in thirty-six to forty-eight hours. By relieved we do not mean that the child has recovered, but that the acute urgent symptoms have subsided.

These cases only, according to the writer's opinion, should be considered primary.

DRUGS.

The internal drug treatment is, to a large extent, symptomatic. A great deal of harm may be done to young children in the thoughtless use of drugs in any disease. In catarrhal pneumonia, it is particularly necessary that, in our endeavors to assist the patient, we do nothing to harm him, for we are treating a disease in which the resisting powers count for everything. In young children the digestive function is very easily put out of order in health. In illness with fever, and the nervous exhaustion attendant on the illness, the stomach is most easily disturbed; the child is not properly nourished and the ability to resist the disease is lessened. Expectorant drugs must be given with care and are better prescribed in tablet or powder form. The practice of using heavy syrups of wild cherry, tolu and others, with large doses of the ammonia salts, only adds to the burden of the patient. For a child 1 year of age with catarrhal pneumonia, one one-hundredth of a grain of tartar emetic and one-fortieth of a grain of ipecac answers well as an expectorant. If the cough is very severe and teasing, one-fourth of a grain of Dover's powder may be added to each dose. The drugs may be given in powder or tablet form with sugar of milk and dissolved in at least two teaspoonfuls of water and given preferably after feeding, not oftener than once in two hours. The ammonia salts so generally used in catarrhal pneumonia as a routine measure are badly borne by the stomach. The muriate is of some value during resolution, but should not be given in larger dose than one-half grain well diluted, at two-hour intervals. I rarely use the ammonia salts.

ANTIPYRETIC DRUGS.

When there is considerable fever and restlessness, which is not reduced by sponging, and when bathing, on account of lack of intelligence in the family, can not be carried out, a combination of caffein, Dover's powder and phenacetin may be used. For a child 1 year of age I would give one-fifth of a grain of caffein, one-half grain of Dover's powder and one and one-half grains of phenacetin at about four-hour intervals. In giving Dover's powder it is well to keep watch of the bowel function.

HEART STIMULANTS.

Heart stimulants are usually necessary, and in their selection two points are to be considered—their effect on the heart and their effect on the stomach. But, first, what are the indications for the use of the heart stimulant? Ordinarily, I think, they are used too early. A heart stimulant should never be given because the child has pneumonia or diphtheria or scarlet fever, but it should be given in pneumonia, scarlet fever and diphtheria as soon as we learn that the heart needs assistance. And, briefly, there are two conditions to guide us, a very rapid pulse and a soft, usually not rapid, pulse with a tendency to irregularity. In a general way, I believe that a heart which is beating at the rate of 150 during quiet or sleep and is not strengthened by sponging or packs needs assistance, and the drug which has served me best is tincture of strophanthus, which drug acts as a direct stimulant to the heart muscle. The pulsations, by its use, are made stronger and fuller and the beats per minute diminish. When the heart's action shows a tendency to irregularity, with a soft, easily compressible pulse, then strychnin is the remedy. For a child 1 year of age one drop of strophanthus in water may be given every three hours. For a child 1 year of age one three-hundredth grain of strychnin may be given every three hours, to be increased to one two-hundredth or even to one one-hundredth of a grain every three hours for a few doses if the case is carefully watched for symptoms of strychnin poisoning. Strophanthus and strychnin possess advantages over all other stimulants in that they do their work and have no unpleasant effect on the stomach, as is the case with alcohol, digitalis and the ammonia preparations. If the condition is very urgent, strophanthus and strychnin may be used in combination. Digitalis I rarely employ because of its tendency to interfere with digestion.

ALCOHOL.

Alcohol in the form of whisky and brandy is very rarely of great service in catarrhal pneumonia. It may stimulate the heart, but its prolonged use greatly upsets the stomach. When used it should be held off until late in the disease, when other means of stimulation fail. Then, given in large amounts, it has been a means in my hands of carrying the patient through safely. One-half of one dram of whisky or brandy, well diluted, may be given every one or two hours to a child 1 year of age. The cases of catarrhal pneumonia, however, actually saved by the use of alcohol, are few indeed.

NITROGLYCERIN.

One one-hundredth of a grain every three hours for a child 1 year of age is of service in cases where there is marked cyanosis with cold extremities. Its use should be discontinued as soon as improvement in this respect is noticed. The one unpleasant effect that I have observed from its administration is a tendency to produce headache and marked restlessness.

BATHS AND PACKS.

A sponge bath for cleansing purposes at 95 F. may be given daily.

What is to be our guide in dealing with the temperature? At what degree of rectal temperature are we to interfere? Only rectal temperature should be considered. This depends to a great extent on what is behind the fever and its effects on the individual. If a child has a high fever and is more comfortable when it is reduced, if he will digest his food better and sleep better, it is our duty to reduce it. Further, by reducing the temperature we lessen the work of the heart, saving it oftentimes many beats a minute. Usually when the temperature has a tendency to run above 104 interference is of advantage, and the best means at our command is the use of local applications of water in the form of sponge baths or packs. If the temperature is not hard to control a sponge bath will answer our purposes. Either salt or alcohol may be added to the water. Ordinarily two teaspoonfuls of salt to a quart of water, or one part alcohol to three parts water is ample. It serves two purposes—the application of cold water acts as a sedative and reduces the fever. Cold sponging, while not controlling the fever as effectually as a bath or pack, possesses the advantage that the most unskilled can use it. For sponging, the child should be stripped and covered with a flannel blanket, the sponging being done under the blanket. In order not to antagonize or frighten the child, it is best to begin with the water at 95 F. and reduce gradually to 70 or 75 F. by the addition of ice or cold water. The sponging may be continued from ten to twenty minutes, and should not be repeated at shorter intervals than ninety minutes. After the sponging is completed the skin should be briskly rubbed for a few minutes with a dry towel. If the temperature is not readily controlled in this way, it is best to use other means, as too frequent sponging exhausts the patient.

The tub bath as a means of controlling the temperature in children has not been successful in my hands for the reason that I have not been able to control active fever cases with it. The exposure, fright and necessary shortness of the bath renders it very unsatisfactory.

By far the best means at our command for controlling a continued high fever is the use of the cold pack. Properly applied, it is without the slightest danger. The pack is prepared as follows: a large bath towel or any thick material may be used; slits are cut in one end of the towel so that the arms may pass through it; the towel is folded over the body, and should extend from the neck to the middle of the thighs; the arms and the legs from the knees down should remain free; a hot-water bag, carefully guarded, should be placed at the feet; the towel is moistened with water at 95 F.—it is well to make the pack warm at first, so that the child will not be frightened and shock will be avoided. I have known severe shock to follow in a child with a temperature of 105 who was put suddenly in a pack at 70 F. In two or three minutes the towel is moistened with water at 85, then at 80. When 80 is reached, it is best not to make the water any colder for half an hour, when the temperature is taken. If, in the beginning, it was 105 and now shows a slight or no reduction, the temperature of the pack may be reduced to 70, or 60 even, by the addition of cold water or ice, without removing the child, the child being turned from side to side so that all the parts may be wet and the patient cooled. During the first hours in the pack, the temperature should be taken every half hour, and when it is reduced to 102 the child is removed and wrapped in a warm blanket. In cases of sudden and rather persistent high fever, the child may be kept in the pack continuously. We aim to keep the temperature between 102.5 and 103.5. I recently kept a 4-year-old boy, ill with lobar pneumonia, seventy-two hours in a pack. The degree of cold necessary to control the fever in a given case will soon be learned. In the case referred to a pack at 70 F. was necessary to keep the temperature at 104 or a trifle lower. The towel should be changed every three hours for a fresh one. An ice bag should be kept at the head, a hot water bag at the feet and the patient covered with a medium weight flannel blanket.

OXYGEN.

Oxygen is of immense service in very severe cases with restricted breathing space. It may be given continuously for one or two minutes out of seven or ten. As often given, one or two minutes every half hour, it is of little or no service.

SUMMARY.

In conclusion: In catarrhal pneumonia, the administration of drugs is of secondary consideration. We first make the child comfortable, place him under proper diet and hygienic rules of living, use local applications, steaming, and means other than the internal use of drugs, when possible. When drugs are given they should, without compromising their efficacy, be made as innocent as possible.

DISCUSSION

ON PAPERS OF DRS. BARBOUR AND KERLEY.

DR. C. F. WAHRER, Fort Madison, Iowa—Dr. Kerley's paper dealt with a disorder which presents many difficulties and which brings very little credit if the issue is successful and much blame if the termination is unfavorable. A large number of these poor children are actually smothered to death by the treatment employed. This may not be the case in modern hospitals where there are skilful nurses and all of the conveniences for modern treatment, but a very large number of these cases must be treated in humble homes where nursing is practically absent. I was recently called in consultation to a little sufferer, 11 months old. I found a miserable room, about 6 by 12 feet, and a stove which kept the room at an insufferably high temperature. On this stove was a tomato can containing a little water, because the family physician had insisted that there must be some moisture in the air. The child's whole chest was covered with a heavy clayey preparation, *about one inch thick*. As if this were not enough the grandmother had added an onion poultice, and over this was a heavy blanket, and over this a feather bed. I am not exaggerating the conditions at all; these are the facts. When I took the rectal temperature of the child it was 110 F. I need hardly say that the child was dead in a few hours. Now, what was the medication? The doctor told me he had been giving a mixture containing a little ipecac and the compound syrup of squills, and that he had added to this some more tartar emetic, doubtless overlooking that the mixture already contained this ingredient, and some muriate of ammonia, with wild cherry. A teaspoonful of this mess was given every half hour. In addition to that it received three drops of aconite, in its its asthenic condition, every half hour. This is a picture that is not infrequently met.

The diagnosis of bronchopneumonia is not always easy; to differentiate between pure bronchitis and pure pneumonia is sometimes well nigh impossible. Only recently I was in consultation on a child of two and a half years which had been treated for bronchitis. After a time the left side of the chest became bulging. The introduction of a hypodermic needle evacuated pus, and the next day I made an incision and evacuated about one quart of pus. The diagnosis was plain. Microscopic examination showed the presence only of the pneumococcus. I am glad to say that this child is getting well.

DR. WILLIAM CARVER WILLIAMS, Chicago—I wish to emphasize in a few words what seems to me to be the most important part of Dr. Kerley's paper. I was especially interested in what he said of the conservation of the vitality of the patient at the very beginning. It seems to me that this is most important, and that it can not be too strongly emphasized. As a matter of fact it is the child's vitality and strength which will save him rather than the drugs or other means employed in the treatment, hence, everything in the way of therapeusis *should* be so planned as not to waste, as the doctor said, a single unit of the child's vitality. I believe that a great deal of such waste occurs because of a neglect of this advice.

DR. R. B. GILBERT, Louisville, Ky.—This subject is often very badly neglected. I can not make a very close differential diagnosis between capillary bronchitis, bronchopneumonia and catarrhal pneumonia, the truth is that capillary bronchitis, in an infant, is practically a pneumonia and should be considered as such. When we consider the minute caliber of the capillary bronchi in the adult, about 1/80 of an inch, and then think how much smaller it is in a child of one year, we can understand what obstruction must arise from congestion and blocking up by mucus. The wonder is that any case of capillary bronchitis or of catarrhal pneumonia in an infant ever survives, even with the most judicious treatment.

One of the essayists repudiated the use of ammonia. I wish to take issue with him, and draw a line at the bromid of ammonium. The muriate of ammonia is certainly very nauseous, the bromid of ammonia is a defibrinizer of the mucin, and a favorite expectorant. I sometimes also employ minute doses of belladonna along with some counter irritant. When an emetic is necessary I think turpeth mineral is decidedly to be preferred. It produces emesis promptly, and within an hour afterward the patient will resume taking food without disgust, which is not the case after ipecac or lobelia. If there is a little fragment of the turpeth mineral left in the system it is absorbed, and acts as a defibrinizer and expectorant.

Dr. Kerley has spoken favorably of Dover's powder, but I can not indorse this, or the use of any other form of opium, and I am rather surprised that he recommends it, even in minute doses. Chloral and bromid are certainly safer and answer the same purpose. The use of mustard plasters is certainly most excellent, even though it is a grandmother's remedy. It is not necessary here to weaken the mustard, put it on full strength and leave it on for a very short time, and the desired effect will be obtained. A bath or pack at a temperature of 80 F., and kept up for some time, will control the fever, and is much more comfortable than the colder application.

DR. HENRY E. TULEY, *Louisville, Ky.*—*I think there are several things we should discard in considering bronchopneumonia in children; the first is the use of the name capillary bronchitis for the disease is really a pneumonia. Moreover, if called capillary bronchitis the laity do not attach sufficient importance to it. We should discard poultices entirely, for they are of no use and are a detriment. The use of all nauseous medicines should be avoided, and the coal tar antipyretics should be discarded. The cold pack will be found most efficient, even when the fever is severe and persistent.*

DR. THOS. D. PARKE, Birmingham, Ala.—The picture so vividly drawn by Dr. Wahrer recalls to mind another scene. I was called in consultation to see a child of 5, supposed to be in a desperate condition from bronchopneumonia—another consultant the day previous having given a fatal prognosis. The child was gasping for breath with the windows down and a kettle containing some tarry preparation boiling in the room. On examination I found that asthma was accountable for the character of the breathing, and had been masked by the bronchitis. The kettle was removed, the windows opened and a favorable prognosis given. And this is what I would emphasize: that in a small proportion of cases, asthma is engrafted on bronchitis and mistaken for bronchopneumonia. These are the cases, apparently desperate, that surprise attendants by prompt and unexplained recoveries.

With Dr. Kerley, I believe the main thing to do in bronchopneumonia is to conserve the energy of the patient. This can be done by giving plenty of air and by watching the intestinal tract for tympany. We all know how these little patients are apt to become tympanitic during the course of pneumonia of any type, and every one who has ever suffered from indigestion, accompanied by marked tympany, knows how distressing and depressing it is. As Dr. Kerley has pointed out so well, we should direct the feeding in accordance with this indication.

My own practice has been *not to awaken a child with pneumonia for the administration of food*. As I have already said, I am not afraid of starving these children. As regards baths, my practice has been, unless the temperature runs exceedingly high, and the child is very nervous, to make use of the pack as employed by Dr. Simon Baruch. He claims that full baths in water at a temperature low enough to reduce the body temperature will be apt to do harm. Some years ago I began the use of packs over the thorax. The mother is directed to dip a towel in water at a temperature of 85 or 90 F. and envelope the child in this from the umbilicus to the clavicles. These are to be changed every five minutes for fifteen minutes at intervals of an hour, provided, of course, the child is awake. If the temperature is excessively high, I give baths under the closest supervision, provided I can secure intelligent nursing. I am in favor of giving just as little medicine as possible. The tendency among all of us is to give too much medicine. We are influenced by environment and by our medical heredity. The first paper demonstrated this, and I think the same tendency was evidenced in Dr. Kerley's paper. We should constantly combat this tendency in the treatment of a disease like pneumonia. Like Dr. Kerley, I watch the intestinal tract and keep the bowels open. Strychnin is my main reliance among drugs, but I do not give it by the mouth. The bitter taste can be avoided, and the same effect obtained almost as quickly, by giving this drug by the rectum. I generally begin the use of strychnin early, and I direct the use of a solution of strychnin injected by means of a small glass syringe into the bowel. I am in favor of large doses of this drug, and hence do not hesitate to administer to a child of one year 1/100 of a grain of strychnin, and on occasion I have given 1/75 of a grain every three hours for some time without producing a tetanic condition. I ordinarily begin with 1/150 of a grain, or 1/100 of a grain and increase the dosage. I do not fear producing twitching because I have never seen it do any harm, since by withdrawing the drug temporarily this symptom passes off.

Dr. Hugh N. Leavell, Louisville, Ky.—I believe the mustard plaster is a most efficient means of relieving congestion in the earliest stages. The plaster I have been in the habit of using is not made at home because of the great variations in the strength of mustard. The plaster can be placed on the chest; I usually place it in the interscapular space and leave it there for from three to five minutes, and repeat this application four or five times a day. A good deal can be accomplished from the use of inhalations, more than from almost any other single method of treatment; nevertheless, it may be carried too far, so that in the later stages such practice may favor the smothering of the child in its own secretions. The same criticism may be made of the too long continuance of expectorant mixtures. Of course, the majority of us believe that syrupy mixtures do more harm than good, and hence I have been in the habit of using the tablet of antimony and ipecac, 1/100 of a grain each, in the early stages of this disease, at intervals of an hour for three or four doses, and then lengthening the interval to five or six hours up to the time of the return of the secretion. But there is another point to be considered in this connection. We know that the infant is not able to expectorate, and that the secretions are swallowed, and that they themselves have a tendency to upset the digestive organs and produce a pyretic condition. A good deal can be done in an antipyretic way by looking after the digestive tract in bronchopneumonia, by emptying the stomach occasionally and promoting the activity of the bowel. I do not favor the use of an antipyretic until this has been accomplished, but after this and the cold pack have failed I would be willing to make use of the coal-tar antipyretics, guarding them by the use of caffein. Stimulation of the heart I conceive to be of paramount importance, but this stimulation should not be begun early in the disease unless even at that time there is distinct evidence of a flagging circulation, such as a shortening of the first sound of the heart. When stimulation is indicated, however, it should be pushed up to the desired effect regardless of what dose is necessary to secure it. I begin with 1/150 of a grain of the strychnia and increase it usually up to 1/60 or 1/50 of a grain.

Dr. P. F. Barbour, Louisville, Ky.—I wish to disabuse the minds of those who think I believe in such an entity as capillary bronchitis. I took pains in my paper to say that it was a physical or pathological impossibility to have a pure capillary bronchitis. At the same time many of us will recognize that in many cases of catarrhal pneumonia it is the catarrhal element which is the dangerous one, and that in other cases there may be very little of this catarrhal element present. It was to draw attention to this phase of bronchopneumonia, and to the management of the secretion of mucus, which is often the greater danger to the child than the prolongation of the disease, or the high temperature, that my paper was especially written. I used the term capillary bronchitis to draw attention to what the older men called capillary bronchitis, i. e., a condition in which the mucus is really the great element of danger. One of the gentlemen has taken me to task for saying that the diagnosis of bronchopneumonia can be made by the tyro. He has taken the term out of its context. What I meant to say was that when we had made the diagnosis of a bronchitis and the temperature suddenly jumped to 103 or 104 F., and the pulse respiration became rapid, all of us would immediately suspect the occurrence of a bronchopneumonia. A previous history of a bronchitis and the sudden advent of the symptoms described would lead most of us to make the diagnosis of bronchopneumonia, even if we were unable to find the pneumonic area.

The question of medication is, of course, one in which we are all interested. Like those who have discussed these papers, I am very much opposed to the use of most of the syrupy mixtures employed by the majority of physicians in the treatment of pneumonia. The mixture of the mucus in the stomach with the syrup soon produces fermentation and flatulent distension. I do not think, however, that we should discard medication altogether, despite the great value of the local applications. I should be unwilling to trust the child entirely to these external applications. The only drugs on which I laid any stress were those used for certain specific indications. First of all strychnin is used to maintain the strength of the child, and secondarily for its effect in stimulating the reflexes, thus securing contraction of the capillary bronchioles and the forcing out of the mucus into the larger bronchi. I believe in strychnin from the start to the finish of bronchopneumonia, and I give it to the point of producing twitching of the muscles. The second drug on which I laid stress was belladonna or atropin. When the air bubbles back and forth in the mucus there is nothing which will give the good results of this remedy, because it not only checks the secretion of the mucus, but aids the action of the strychnin in stimulating the respiratory centers. I think all who have employed this remedy will bear me out in this statement. The last drug I insisted on was aconite, more in the prevention of bronchopneumonia than after its full development. Those of us who have used aconite in cases of acute tonsillitis, acute coryza and acute bronchitis must have noted its effect in checking the inflammation without upsetting the stomach.

With regard to the swathing of the child in poultices and jackets, I would say that I am opposed to the use of the oil-silk jacket for the reason that this material is impervious to moisture and air and prevents the exhalations from the skin. I do believe that light cotton batting jackets are of distinct service. Dr. E. Fletcher Ingals, Chicago, reports on more than 1,000 cases of pneumonia treated in the Cook County Hospital, and states that, irrespective of the other treatment, the mortality was 5 per cent. less in the cases treated by the cotton batting jacket than in those in which this jacket was not used. The sensation of cold striking the chest when the arms are uncovered seems to point to the value of some such protection, particularly in children who can not be kept as quiet as adults.

I have been in the habit of using nitroglycerin at the time of the bronchopneumonia when the dyspnea arising from the bronchial asthma is marked. The action of this drug is very evanescent, and minute doses frequently repeated seem to me to do better than large doses given at longer intervals.

Dr. C. G. Kerley, New York—Those cases which have been described in the older books as capillary bronchitis have presented, on autopsy, the pneumonic elements. Regarding my own paper, I would say that I carefully stated that I employ sedatives reluctantly, yet there were times when such medication was of distinct advantage. I have used Dover's powder and have recommended it because I have found it of service. If there is a sedative which I would not give a young baby it is chloral, because of its disturbing action on the stomach, and its depressing effect on the heart in young infants. No exact temperature can be laid down at which it is necessary to employ antipyretic measures; the effect of the fever on the patient must be our guide.

With regard to drugs, I may say that I am a thorough believer in drugs, but insist that they be given properly, that is, in a form in which they will do no harm while aiding in effecting a cure.

It is an extreme view that excludes all medication. I said that if food or medicine were to be given at night the intervals should be made as long as possible, but I do not wish any one to infer that I advocate giving food at specific intervals during the night. I have not seen much benefit from rectal medication; the absorption is very uncertain and the rectum is apt to show intolerance very soon. In the treatment of children we can not go very much by experience with adults. Children should be sufficiently clothed and kept covered, but I see no reason for employing any special form of clothing. Dr. Tuley will remember that in the New York Infant Asylum we used the oil-silk jackets very extensively, but in more recent years

I have discarded them, and I am firmly convinced that the cases do better without these jackets, or even the ordinary cotton batting jackets. I wish to emphasize especially the great importance of avoiding the common error of overclothing these patients.

Clinical Report.

BILATERAL ACUTE GLAUCOMA FOLLOWING ARTIFICIAL MYDRIASIS.[*]

WALTER L. PYLE, M.D.
Assistant Surgeon to Wills Eye Hospital.
PHILADELPHIA.

The points of interest in the following case are:

1. The absence of any previous objective or subjective symptoms indicative of glaucoma.
2. The violence of the attack following a single instillation in each eye of such a weak mydriatic (cocain and homatropin solution, gr. v to ℥i.)
3. The long delay (39 hours) before the appearance of the acute glaucomatous attack.

On the morning of April 28, 1903, I was consulted by a woman of 50 in good health, but of rheumatic tendency, with a vague history of periodic ocular neuralgia, and symptoms of accommodative asthenopia. The eyeballs were not congested, the tension was about normal, and the anterior chamber of moderate depth. The pupils were active to light and accommodation, and so small that a satisfactory view of the fundus was not obtainable. One drop of a mixture of homatropin and cocain, 5 grs. of each to the ounce, was instilled in each eye. Complete mydriasis occurred in about 30 minutes. No cupping of the discs was seen, and no arterial pulsation or fundus changes were noted, although there was some peripheral lenticular segmentation. The ametropic correction was: O.D.+S.0.75+C.0.25 ax.120°; O.S.+S.0.75+C.0.25 ax.60° V.=6/5. The patient had previously worn simple spherical lenses (+S.3.25) for reading only, ordered by an optician.

The patient left my office without complaint or discomfort, and when I saw her the following morning there were no ominous symptoms. At 2 a. m. of the morning of the next day she was awakened by violent pains in the eyes, followed by intense retching and vomiting, and rapid failure of vision. I saw her about noon and found a typical attack of acute glaucoma in each eye. The tension was +2 or 3. The cornea of the right eye was hazy, rendering the fundus-view very unsatisfactory, but enough could be seen to show that there was no cupping of the disc, although there was marked arterial pulsation. The left cornea was so hazy as to obscure even the red fundus-reflex. The vision fell to counting of fingers in the right eye, and doubtful light-perception in the left. The pupils were widely dilated and inactive, the anterior chamber was abolished and there was intense conjunctival and ciliary congestion.

Eserin and massage were immediately applied, and local heat, diaphoresis and anodynes ordered. Sodium salicylate in 10-grain doses was given every two hours, tincture strophanthus in 5-drop doses every four hours, and mercurial inunctions were instituted every three hours. The condition continuing to grow worse, I performed posterior sclerotomy with a valve-like conjunctival flap, in both eyes. The following day ocular massage was again instituted and instillations of the following solution applied every three hours:

℞.	Eserin salicylate		02
	Pilocarpin hydrochlor.		05
	Sol. adrenalin (1-5,000)	10	

The pain was relieved immediately by the incision, the tension fell rapidly, the anterior chamber deepened, the pupil began to contract and the normal visual acuity was established in 72 hours. Two weeks later all traces of the disease had disappeared, but the perimetric examination showed slight contraction of the fields of vision both for form and color. There was no cupping of the discs or vascular anomaly in either eye. With correcting lenses the visual acuity was 6/5 in each eye. The question of iridectomy in the interval of quiet is now an open one.

On account of the absence of significant premonitory signs, and the long delay in the appearance of the acute symptoms, there may be some question as to intimacy of the connection between the application of the mydriatic and the glaucomatous attack. In any event, in view of the happy issue, the outbreak may be considered beneficent, as it enforced preventive measures that otherwise might have been delayed until too late.

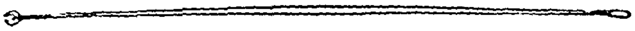
New Instrument.

A COMBINED LINT CARRIER AND FLEXIBLE PROBE.

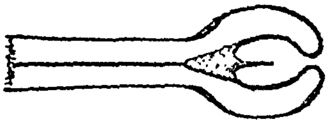
RICHARD LIGHTBURN SUTTON, M.D.
ASSISTANT SURGEON, UNITED STATES NAVY.
WASHINGTON, D. C.

Anyone who has tried the ordinary probes, directors and forceps for inserting gauze or lint drains into narrow passages or deep wounds is fully aware of the difficulty often encountered in the slight, but frequently tedious, performance.

An instrument which is sufficiently stiff and unyielding to ensure a positive hold on the strip of drainage material is seldom flexible enough to allow of its being pushed through any except an almost direct passage, while the pliable ones now in use, so far as I have been able to find, have either a plain, rounded point, to which it is extremely difficult for one to attach a piece of gauze in such a manner as to insert it in a wound and have it remain there when the instrument is withdrawn, or a flattened extremity with a V-shaped opening for grasping the lint or other material employed.



The probe.



The carrier end enlarged.

After a thorough trial, extending over a considerable period of time, I find the combined carrier and probe here illustrated superior to any I have yet seen. It is a trifle greater in diameter than those commonly employed, about eight inches in length, and is best made of sterling or German silver, aluminum being too soft and pliable.

One end is armed with a single sharp tooth, guarded laterally by two rounded projections which curve toward the median line, each having its inner border slightly hollowed out, while a shallow groove extends backward from the base of the tooth for about one-eighth of an inch. Consequently the strip of material used lies closely along the sides of the guide, and there are no projections or knots to hinder its passage into the wound.

The other extremity is bulbous in shape, and, like the one first described, is connected to the body of the instrument by a slightly constricted neck.

The central portion can be simply smooth and rounded or octagonal in shape. The latter affords a much firmer grip, and, as the additional cost is but slight, is to be preferred.

Phenician Origin of Leprosy in Western France.—Baudouin describes and illustrates certain relics in la Vendée in western France which indicate that the Phenicians established colonies there in prehistoric days as they did in England. (*Gaz. Med. de Paris.*) He believes that the endemic and isolated leprosy which is found in this province is also a relic of their occupancy. Leprosy was known to the ancients as the Phenician disease.

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[*] Reported in discussion at a meeting of the American Ophthalmological Society, in Washington, D. C., May 12, 1903.

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MEDICAL ACTIVITY IN THE STATE UNIVERSITIES.

There is unprecedented activity at present along medical lines in the state universities. This activity consists in the rapid installation, in many state universities hitherto devoid of them, of chairs in human anatomy, physiology and pathology, and instructorships in subjects like physiologic chemistry, embryology, neurology and bacteriology. In other words, provision is being made with the utmost speed to give instruction in the subjects which in reality constitute the curriculum of the first two years of the modern medical school.

The cause of this activity appears to be threefold: 1. There has been a rapid advance in the recognition of the cultural value of purely scientific studies; chemistry, physics and biology, so long denied entrance to and proper support in college curricula, have demonstrated in an overwhelming manner their importance as educational instruments and their efficiency in developing an attitude toward life which the classical course failed to produce; the success of these subjects has paved the way for the introduction of other scientific branches hitherto debarred. 2. The medical schools attempting to keep pace in their teaching with the progress and differentiation of the fundamental medical sciences, have found that it is desirable to have these sciences taught by men who are paid to give their whole time to the subject; the fees derived from students is insufficient to pay the necessary salaries and at the same time to supply the buildings and expensive equipment required for the teaching, if it is to be done by the best methods of today; it has become obvious that either endowment for the medical school must be obtained, or the medical school must ask institutions with incomes like the state universities to undertake the medical work of the first two years of the course. 3. Certain medical schools having demanded a college degree for entrance, a conviction has speedily grown that at least some college education, in addition to high-school education, should be required preliminary to entrance on the work of the medical course; this conviction, entering into struggle with another settled persuasion, to-wit: that the student must receive his medical degree at a time when he is not too far advanced in life, has led to a compromise in a number of instances, by which arrangements are made for a kind of "telescoping" of the college course with the medical course, the student to pursue in his first two years of college work the literary studies necessary for his liberal culture, and the scientific studies desirable as a foundation for the professional course which follows, and in his last two years of college work the subjects now included in the first two years of the medical curriculum; at the end of four years the student receives his college degree of S. B., and then proceeds to the two years' clinical work of the medical school, the medical degree being given at the end of the sixth year. Colleges and state universities with affiliated medical schools have been quickly falling into line with this plan; other colleges and state universities are now rapidly adopting it in self-defense, for in its absence a college is likely either to lose at the end of their sophomore year of work (i. e., before graduation) the students who contemplate the study of medicine, or never to get the prospective medical students at all.

It will be interesting to watch the effect of this sudden and radical change in the colleges and state universities. The alteration is viewed by some with fear and dismay, by others with confidence and satisfaction. Men like President Hadley of Yale see in it a threatening of liberal culture and the beginning of the downfall of the American college, and plead that the tendency be checked, while, again, men like President Eliot of Harvard and President Butler of Columbia view the movement as a just recognition of the extension of cultural subjects and a praiseworthy attempt to combine most economically liberal culture with professional study. One thing seems certain: if collegiate study should come to be required by all the better medical schools as prerequisite to entrance, the total number of college students, especially in the S. B. course, will be materially increased, for a great number of students enter the medical colleges at present with no training whatever beyond that received in the high schools. But the argument that this increase in the total number of college students will lead to a commercializing and cheapening of the college course, and to a loss of those ideals which we have learned to associate proudly with the American college should not be too lightly dismissed; if it should prove to have weight, there ought to be no want of alacrity in retracing the steps which are being taken.

The effect of the new departure on the medical schools can scarcely fail to be other than salutary, provided always that the colleges and state universities concerned install the medical subjects on a scale comparable with that obtaining for the scientific subjects already represented in the college curriculum. It must always be considered an advance to have the subjects of anatomy, physiology and pathology taught for their own sake as sciences, rather than merely as far as they can at any given moment be applied to practical medicine and surgery. When taught as sciences to students, the latter are much more likely to make new practical applications of them later in life than could otherwise be possible; those who favor this view maintain that a higher standard of clinical work will inevitably be quickly noticeable as a result. That the combined six years' course will lessen the activity and prestige of the medical schools now demanding a full four years' college course for admission and a four years' medical course afterward, seems scarcely likely; there will probably always be a number of men who will choose to give eight years to the two courses, either with the hope of attaining to a correspondingly better standing in the community and with the profession, or from motives of personal educational satisfaction.

THEORY AND PRACTICE.

While theories come and go, apparently helpful for a time and sometimes actually lifting medical practice over hard spots in the road, only actual clinical observations become true stepping-stones to higher and permanent things. The simple discoveries in our southern states of intestinal parasites of several kinds hitherto supposed to be almost exclusively foreign in their habitat will almost assuredly do more to explain the chronic anemia thus far thought to be due to malaria than the many wonderfully reasoned out theories on the blood destructive power of malarial cachexia or of the long-continued use of quinin with which medical meetings have been occupied as long as the memory of man runneth, in this country at least. From elaborate theories of insidious hemolysis or the inhibition of blood manufacture to the simple demonstration in the stools of the uncinaria or the so-called Cochin-China worm seems like a drop to bathos, but, as usual, theories sink at once to the limbo of oblivion when actual observation asserts itself.

There has always been this curious by-play between theory and practice in medicine, with theory usually assertively claiming the center of the stage. A hundred and forty years ago when Auenbrugger was making his notable observations on thoracic disease by means of percussion, the two leaders of medicine in Vienna—Van Swieten and De Haen—were writing voluminous treatises on medicine, including the subjects of pulmonary tuberculosis, pleurisy and pneumonia, yet without a mention of percussion. De Haen especially complained of the obscurity of diagnosis in chest diseases and the extreme difficulty of recognizing pleurisy with effusion, yet neither of these great lights of presumably scientific medicine, each with at least a dozen folio volumes of medical writing to his credit, thought it worth while to refer to the new method of their humble colleague (which was, as Skoda declared, the first step in modern diagnosis), though they could not but have known of it, since Auenbrugger was actually working in clinics under their direction. Evidently what we need in medicine is not theory but observation, and observation, and again observation.

On the other hand, there is observable a curious sense of opposition in the minds of some practitioners to the introduction of new aids to exact observation—what they are apt to call new-fangled methods, and mere technic in diagnosis. Many physicians, for instance, have hesitated as to whether blood counting would be of sufficient service to make it worth while learning. Now, there is no doubt that not a few cases hitherto considered to be anomalous and fatal typhoid in comparatively young patients are really examples of acute splenic anemia, the assured diagnosis of which can only be made after a differential blood count. This is only one example. The suggestion that practitioners will have to have a handy microscope and blood-counting apparatus which they can carry without inconvenience to the bedside must become a matter of serious consideration for conscientious physicians who wish to keep abreast of progress in medicine and give their patients the benefit of recent advances.

Such a feature is apt to be spoken of as a refinement in diagnosis. Yet the best medical progress for the last half century has consisted in the adoption of just such apparent refinements. There are few careful physicians now who think they can assuredly recognize diphtheria without a bacteriologic examination. A few years ago some one asked in a Berlin medical society: "Will the practitioner of medicine be expected to take a culture from the throat of his patient before making a diagnosis?" To which one of the oldest but most progressive members of the society responded that not fifty years before in the same society he remembered hearing asked with just the same air of finality, "Will a physician be expected to carry a thermometer around with him, with all the risks of inaccuracy in the instrument and chances of breakage and dangers for delirious patients, just to decide a little more exactly the existence of fever which so far physicians have been able to determine quite satisfactorily by simple touch?" And so history repeats itself. The new things are coming in in spite of the over-conservative. Happy the man who realizes what must be done, and accepts his obligation to get at it without delay.

REDUCING BODIES IN THE URINE OF CHILDREN AND THE SAFRANIN TEST.

It is a well-known fact that human urine, even in perfect health, holds in solution some constituents which act as reducing agents toward metallic oxids and other easily reducible compounds. Uric acid and various nitrogenous waste products of the alloxur—or purin—group possess such reducing properties. The most important morbid urinary constituent having a reducing action is, of course, dextrose. While it is extremely easy to identify larger amounts of dextrose in urine, it is almost impossible to do this if traces only are present in this complex fluid. Hence it is still an open question whether human urine in perfect health, and provided also that the ingestion of sugar has not been in excess of a certain physiologic limit, ever contains any dextrose.

For many years attempts have been made to find a reagent capable of indicating beyond a doubt small amounts of dextrose in urine, but not affected by uric acid, kreatin and other bodies of this type. Safranin was first recommended as such a reagent in 1888 by Crismer,[1] and it was then claimed that uric acid, kreatin, chloral hydrate, chloroform, hydrogen peroxid and hydroxylamin, all of which reduce oxycuprihydrate in Fehling's solution, do not reduce safranin. The safranin test has, however, never become very popular, nor has it been used extensively by individual investigators, in spite of the fact that the reagent is easily obtainable and the technic of the test simple.

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[1] Ann. de la Soc. Méd., Chir. de Liege, Oct., 1888.

Safranin is one of the anilin dyes. It is chemically an amidoderivative of phenylphenazonium, is deep reddish-yellow in solution, and has been used extensively by botanists, zoologists and biologists in general as one of the best nuclear stains in the study of karyokinesis. The test for sugar in urine is made by using a 1 to 1,000 watery solution of safranin, adding to it a certain volume of a solution of sodium hydroxid, then varying amounts of urine. The mixture is then carefully heated to below the boiling point and the presence of sugar is indicated by a change in color from the intense reddish-yellow to a pale straw or amber-yellow. The oxygen of the air soon, however, reoxidizes the reduced safranin. Christopher[2] has for a number of years been using the safranin test as a matter of routine, and in a systematic manner in every urine examination, and he has tabulated his findings of 3,504 cases. His results are extremely interesting and highly suggestive. They show among other things detailed in the paper that the reducing power of urine in children varies within wide limits (excluding, of course, cases of obvious diabetes from these considerations). Christopher has perhaps not established beyond a doubt that the reducing body indicated quantitively by safranin is indeed dextrose, but whether it is or not, the figures obtained from so large a material as his must mean something, even if we are not at once in a position to give a correct etiologic interpretation. If, indeed, the reducing body were sugar, a new question will arise as to the origin of this sugar in the urine of children. We know now that sugar may make its appearance in urine from either one of several causes, viz.: 1. The lack of the proper oxidizing agent, normally probably an enzyme furnished by the islands of Langerhans of the pancreas (pancreas diabetes). 2. The overloading of the blood with sugar by an overabundant conversion of the reserve glycogen of the liver into dextrose (hepatic glycosuria), and, 3, morbid changes in the secretory renal epithelium in consequence of which the kidney becomes pervious to sugar (renal phloridzin glycosuria).

Whatever the final interpretation of Christopher's results may be, his careful and suggestive work furnishes valuable data in demonstrating certain deviations from the normal metabolism, measured in terms of reducing bodies found in the urine of sick children.

POLYMYOSITIS (DERMATOMYOSITIS).

In this country acute polymyositis, or dermatomyositis is apparently a very rare disease, judging from the lack of reports of cases, but the experience of Oppenheim[1] in Germany, who, in the course of a few years, has seen over twelve cases in clinical and private practice, may indicate that the disease is overlooked or confused with some other condition.

The etiology of the disease is unknown, and conditions which in some cases seemed predisposing or actually causative have been absent in other cases. A case of Senator's had previously eaten stale crabs; one by Kell had eaten fish. Parasites (*Gregarinæ*) and intoxication of intestinal origin have been suggested, but no observations have been made which prove definitely the etiologic rôle of such agents. The course of the disease, as described by Oppenheim from his many observations, is as follows: The onset is acute or subacute, preceded by heaviness in the extremities, headache, gastric disturbances, chills, etc. The first definite symptoms are severe pains in one or more muscle groups, commonly felt first in the calf or shoulder and upper-arm muscles. The pains are pictured as drawing, tearing and boring in character, are greatly increased by passive motion, and allow of only limited active motion. Aside from this limitation to motion there develops eventually in severe cases a genuine paralysis, due to inflammation and degenerative changes in the muscles. Contractures and muscular atrophy result. Pressure on affected muscles elicits intense pain. Simultaneous with the appearance of pain and disturbance of motion, a marked swelling of the region occurs, which is referable to edema of the muscles, skin and underlying tissue. The swelling is at times a true edema, pitting on pressure; at other times it appears as a dense, tense infiltration suggesting scleroderma. There is also a concomitant exanthem or dermatitis which may resemble erythema, erysipelas, purpura, roseola, urticaria, herpes, psoriasis, erythema nodosum or eczema. Sugillations have also been observed. These skin manifestations are prone to recur and usually disappear, leaving no marks but a pigmentation. They occur particularly over the affected muscles. Fever is present constantly and may be either continuous or intermittent.

Special symptoms are caused when particular muscle groups are involved: ptosis, diplopia, disturbances in respiration and deglutition, and rarely the heart has been involved. Stomatitis and angina have been seen in some cases. Splenic tumor may be present but is inconstant. Aside from the hemorrhages seen in the muscles, profuse bleeding from the nose, bowels and kidneys and extreme menstrual flow may occur. Nephritis is the most frequent complication, but pleuritis, mediastinitis and orchitis have been observed. The tendon reflexes are decreased and may even be lost. The prolonged inflammatory condition in the skin and underlying tissue may eventually lead to a condition resembling scleroderma, and Oppenheim thinks that differentiation may at times be difficult. The disease lasts for several weeks to a year or more, and death may result from exhaustion or complications. Batter[2] states that the muscles are the seat of hemorrhages, the fibers are swollen and granular, and the stroma infiltrated with round cells.

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[2] See this issue, p. 1711.

[1] Berliner klin. Woch., Nos. 18 and 19, 1903.

Dr. F. Forchheimer,[3] Cincinnati, reported a case of dermatomyositis at the recent meeting of the Association of American Physicians, the disease being "characterized in this case by pustular invasion of certain regions followed by tenderness, swelling and edematous infiltration of muscles." It was thought that the woman's nervous condition was partly responsible for the disease in this case. Although the prognosis is grave, Oppenheim obtained good results by forced sweating.

The disease certainly bears the marks of a microbic infection, with the production of various cytolysins. Oppenheim appears to have made no blood cultures in any of his cases, and it may be hoped that deficiencies in the observations will be remedied as new cases present themselves for study.

"DICHOTOMY" OR DIVISION OF FEES.

The division of fees or, as it is euphemistically called, "dichotomy," is the subject of a signed leading article in *La Presse Medicale* of May 9. It would appear from the statements there made that the evil has been even a more serious one abroad than with us and that the public, penetrating the disguise of the name, have—to use a common expression—got onto it very thoroughly, so that, as the editorial writer says, its doom is sealed in France. He remarks that certain surgical fortunes have been greatly favored by this practice during the past forty years and that it extended from the surgeons to specialists and later to the general consulting practitioners. The editor, Dr. de Lavarenne, introduces an interesting little bit of medical history to show the antiquity of the practice.

It seems that in Louis XIV's time there was a young surgeon of Paris whose practice was rapidly growing, but who lacked the royal patronage to crown his success. The chief surgeon to the King, Marechal, was too watchful and jealous of his own perquisites to allow anyone to encroach on him, but the King's physician, Daquin, was a friend of the young surgeon and by his connivance the latter was, during a temporary absence of the real surgical official, introduced to perform a customary operation of those days, phlebotomy, which the physician had declared advisable. For his services Daquin received a considerable sum from the surgeon, but, as it so happened, the King, growing anxious on account of the bleeding, sent a courier to his chief surgeon, who hastened back and, not being on good terms with the chief physician, there was consequently a row. The King was informed of the facts, which put him in a terrible rage, and Daquin was arrested and his fate put in the hands of the council of state, which unanimously voted his death on the ground of his having made traffic of royal blood. The King, however, so far recovered from his anger as to commute his punishment to banishment from Paris and degradation from his position, which he did not long survive.

This little piece of back-stairs history of the times of Louis XIV is at least entertaining. Human nature, however, is the same at all times and of course there is a possibility that if the practice of division of fees is stamped out in one way, there will be unprincipled persons enough to contrive some other to bring about the same results, but they need not be reputable members of our honorable profession. It certainly existed 200 years ago in France, as the above record shows, and it would appear that it has become altogether too general in that country during the last half century. With us it has certainly never had even a taint of respectability and has been practiced only by those who travel about it and has been practiced only by those who are on the ragged edge of regularity and those who are clear over it among the outlaws of the profession. It is to be hoped that it will become even more disreputable in the future than it has in the past.

SURGERY IN ASYLUMS.

In the April number of the *Journal of Mental Science*, an asylum superintendent, Dr. Robert Jones of the Claybury (London) Asylum, reports two cases of abdominal surgery. One of our contemporaries[1] comments on these, and strongly suggests a doubt whether anything like this could occur in any of our American asylums; in fact, questions whether abdominal surgery is ever practiced in asylums for the insane in this country. The assumption is rather gratuitous. Surgery in the insane covers the whole ground, and asylum physicians have not only to perform abdominal operations, but sometimes do some of the most elaborate and critical emergency operations in various parts of the body. Our contemporary is evidently ignorant of the facts that among American asylum supertendents there have been surgeons of national reputation, and that probably the first successful laparotomy for a foreign body in the intestine was done by an asylum physician in this country, Dr. White, and reported in the beginning of the last century.[2] The patient had swallowed a teaspoon, and the physician boldly opened the abdomen and extracted it, closed the intestinal wound with a glover's stitch, recovery taking place without anything especially eventful occurring. The case was a good one of clean surgery well in advance of the day. Since that time the number of abdominal operations in asylums for the insane has been legion. The trouble has not been that the asylum physicians were unwilling to perform such work, but that they have been too slow in reporting it. The asylum physicians have not been behind the rest of the profession in their ability to adapt themselves to practical things and to meet emergencies. We say this with due appreciation of their deficiencies. Of course, the asylum is not a general hospital, and major surgery is not an every-day occurrence in it, but it has occurred sufficiently often to show that when required it can be done. The average asylum physician, even the politically appointed type, has been, as a rule, a fair physician and often an equally respectable surgeon. The trouble has been too often that he has not been sufficiently a specialist in the department in which he is engaged.

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[2] Allbutt's System, vol. vi.

[3] Medical News, May 16, 1903, p. 950.

[1] Phila. Med. Jour., June 13.

[2] Medical Repository, iv, 1807, p. 367.

EDDYITES AND LUNACY.

A correspondent of the New York *Sun* of May 30 remarks that in his own limited range of acquaintance among Eddyites he finds seven cases of incurable insanity. Five of these cases were mothers and four wives of well-known healers; the sixth and seventh were young mothers who attempted to destroy their children, driven crazy by trying to elucidate Mrs. Eddy's problems. The Eddyite mother who actively attempts to destroy her child, instead of passively doing so, as is the custom among the followers of the "profitess," has not come under our observation, but we can easily see how this metaphysical lunacy might strike certain defective classes and bring about such results. We know that in times past the ordinary gross spiritualistic ideas have colored insanity and produced, in many cases, mental breakdown, and it will be surprising if, in the future statistics of asylums, Eddyism—under some name or other—is not figured as an etiologic factor of mental disease.

TYPHOID-INFECTED BLANKETS.

Considerable medical interest and concern has been shown in England recently in regard to the outbreak of typhoid, apparently due to infected blankets from the South African war camps. Both the *British Medical Journal* and the *Lancet* have editorially given the subject considerable space, and it is suggested that, while a limited epidemic on a steamship which was attributed to this cause was comparatively slight, the fact that similarly infected blankets have been distributed through the empire in enormous sales of condemned war supplies, and possibly transported to other countries, is a serious one. It is a reasonable presumption in ordinary cases that articles that have been used in hospitals in which infectious diseases have been treated are sold to the public only after thorough disinfection. If this has not been done by the authorities at the British war office serious responsibility rests on them. The *Lancet* remarks that in some ways this regrettable occurrence will expose Great Britain to the ridicule of certain other nations, but that in no other country in the world is there a public health service that could have acted with greater promptitude and efficiency than was the case in Great Britain on the announcement of the facts.

ALCOHOL AND INSANITY.

The municipal authorities of Glasgow, according to the *Lancet*, recently appointed a special committee to inquire into and report on the effect of alcoholic drinks on the increase of lunacy, which has become a serious matter in that municipality and in Scotland generally. A copy of the report, our contemporary says, furnishes serious matter for consideration. Out of 565 admissions to the Glasgow District Asylum and 213 admissions to observation wards of the poorhouses during twelve months, no less than 33 per cent. were traceable to alcoholic drinks as a cause. The inquiries show that want and privation have not led to insanity, nor were they causes of alcoholic drinking, for the cases thus admitted were from all classes and conditions of society, and in the majority the home surroundings, conditions and earnings were good. These are not isolated facts for the figures of the Royal Edinburgh Asylum point in the same direction. The committee has forwarded copies of its report to the secretary of state for Scotland as a matter for the serious attention of the government. The usual estimate as to the amount of insanity due to alcoholic drink in this country has been about 10 or 12 per cent., and to find that it is more than twice as great in Scotland at the present time is rather startling. There also seems to be a large increase over what was formerly the case in that country, and this increase is especially marked in the great cities and industrial centers. We would not say that the average workingman takes to drink, but the working population of the great cities are certainly the chief patrons of the saloon. It was reported, during the recent coal strike, that in a certain town of 16,000, made up almost exclusively of a mining population, in the anthracite region of Pennsylvania there were 190 saloons. Alienists have been conservative heretofore in estimating the amount of insanity due to liquor and have endeavored, as a rule, to understate rather than overstate the facts. This municipal report certainly goes far beyond their average estimates.

Medical News.

ILLINOIS.

Hospital Site Donated.—A valuable piece of land at Kewanee has been given for the proposed Catholic hospital. The building will be erected this season and will cost about $35,000.

Personal.—Dr. Philip F. Gillette, assistant physician at the Illinois Northern Hospital for the Insane, Elgin, has resigned, and will practice in Rockford. He has been succeeded by Dr. Joseph M. Kearney, formerly assistant at the Cook County Hospital for the Insane, Dunning.

Chicago.

New Hospital.—Englewood Hospital and Training School for Nurses is to erect a hospital building to cost $125,000. It will accommodate 150 patients, and will have 60 private rooms.

Personal.—William Whitford sails for Europe June 23.—Dr. J. Elliott Colburn has been made professor of ophthalmology in the Chicago Eye, Ear, Nose and Throat College.—Dr. Frank Allport has been appointed trustee to the Illinois Charitable Eye and Ear Infirmary.

Consumption Leads Pneumonia.—Pneumonia is beginning to give place to consumption as a principal cause of death. The health department says:

> Since the first of the month 117 deaths have been reported from the latter disease and 114 from pneumonia; in May there were 264 deaths from consumption and 646 from pneumonia. This latter disease is essentially one of vitiated, germ-polluted and overheated atmosphere; with the advent of weather which invites open doors and windows, and consequent influx of fresh air, pneumonia steadily declines.

Mortality of the Week.—The 11 deaths recorded during the week ended June 13 more than during the week of June 6, served to raise the annual rate from 12.73 to 13.05 per 1,000 of population. This, however, is 7.5 per cent. below the average June rate between 1895 and 1902. Of the principal causes of death only bronchitis, convulsions, heart diseases and violence show any notable increase, while the acute intestinal diseases, apoplexy, consumption, nervous diseases, typhoid fever and suicide show an aggregate of 33 fewer deaths than in the previous week.

MICHIGAN.

Nottingham Bill Signed.—Governor Bliss has signed the new medical practice act.

Addition to Biologic Department.—Messrs. Frederick Stearns & Co., Detroit, are having built a two-story addition 60 by 161 feet, to their biologic building, which they erected less than two years ago.

Liberal Appropriation for Vaccination.—The common council of Detroit, on June 9, made an appropriation of $30,000 for general vaccination, complying with the request of health officer Dr. Guy L. Kiefer.

Illegal Practitioner Fined.—"Dr." William W. Phippen, Grand Rapids, charged on complaint of the Kent County Medical Society with the illegal practice of medicine, was found guilty, May 27, and ordered to pay a fine of $25 and costs amounting to $10. He expressed his intention of taking an appeal.

Commencement Time.—The Michigan College of Medicine, Detroit, held its commencement exercises, June 11, graduating a class of 12. The summer course of lectures was opened, June 10, by Dr. Hal C. Wyman.——Grand Rapids Medical College graduated a class of 16, June 3. Dr. William Fuller delivered the introductory address, and Dr. George L. McBride delivered the address to the class after the presentation of diplomas.

Comparative Morbidity.—For May, 1903, compared with the average for May in the 10 previous years, measles, scarlet fever, intermittent fever, typhoid fever, smallpox and whooping cough were more than usually prevalent; and remittent fever and erysipelas were less than usually prevalent. In the two preceding monthly bulletins it was stated that the diseases which usually cause the most sickness in March and April were less prevalent than usual in those months in 1903, and the same statement will apply to the month just passed.

Mortality of Michigan.—The total number of deaths reported for May was 2,733. This number was 12 fewer than the number returned for the preceding month. The death rate for the month was at the rate of 13.0 per 1,000 estimated population per annum. Important causes of death were as follows: Tuberculosis, 228; typhoid fever, 42; diphtheria, 45; scarlet fever, 25; measles, 28; whooping cough, 34; pneumonia, 254; cancer, 125, and violence, 205. There was 1 death from smallpox during the month, and 3 deaths were reported from lightning.

Most Dangerous Communicable Diseases.—Meningitis was reported present in Michigan during May at 6 places; whooping cough at 43 places; diphtheria at 59 places; typhoid fever at 65 places; smallpox at 127 places; scarlet fever at 131 places; measles at 135 places; and consumption at 196 places. Meningitis reported at 2 places less; whooping cough at 11 places less; diphtheria at 3 places more; typhoid fever at 13 places less; smallpox at 25 places less; scarlet fever at 7 places less; measles at 13 places less, and consumption at 9 places more, in May than in the preceding month.

NEW YORK.

New York City.

Bequests to Hospitals.—By the will of Charles M. Chittenden about $50,000 is to be divided between the Presbyterian Hospital and the Home for Incurables at Fordham.

Addition to Bellevue Hospital.—It is proposed to purchase the block between Twenty-eighth and Twenty-ninth streets and First avenue to afford needed room for grounds and buildings for Bellevue Hospital.

The Spitting Nuisance.—A new incident in the crusade of the health authorities against the spitting nuisance is the display of signs in conspicuous places in the streets, which call attention to the fact that spitting on the sidewalk is unlawful, and that offenders are subject to arrest and fine.

Physician Contracts Smallpox.—Dr. Clinton B. Knapp, an interne of the French Hospital, has contracted smallpox from one of the hospital patients, and has incidentally furnished another example of the necessity for revaccination from time to time. All who had been exposed to the disease from the admission of an immigrant were vaccinated except Dr. Knapp, who thought he was sufficiently protected by a vaccination done in childhood. He was taken to the Kingston Avenue Hospital.

The Antitoxin Frauds.—The medical profession has been disgraced by the announcement in the public prints that about sixty physicians of this city are charged by the district attorney with having obtained diphtheria antitoxin free from the city, under the plea that it was to be used on individuals too poor to pay for this remedy, and have then sold the antitoxin to such persons at prices even in excess of the usual price paid at drug stores. Last December the mayor received information that such a misappropriation was going on, and as a result it is alleged that the district attorney has obtained proof that 300 vials of antitoxin have been purloined and disposed of in this manner. Most of the physicians affected by these charges live and practice on the lower east side and among the Bohemians above East Seventieth street. Already a dozen or more of those accused have been arraigned and have been held in $500 bail each to appear for a hearing.

PENNSYLVANIA.

Gifts to Hospital.—James P. Scott and his sister, Miriam D. Thropp, have each recently given $1,000 to the new Columbia Hospital.

Pre-Fourth-of-July Tetanus.—Ten boys are reported to have died from tetanus in Pittsburg within a few days. In all of the cases the disease followed injury by toy pistols.

Workmen Assess Themselves for Hospital.—To make up a deficiency caused by a reduction of the state appropriation for the city hospital, the workmen of McKeesport offer to assess themselves 25 cents each per month for four months.

Philadelphia.

The Morton Will.—The will of the late Dr. Thomas G. Morton, just probated, shows an estate valued at more than $200,000, all of which is devised to his widow and children.

Impure Food Dealers Fined.—Out of the score of dealers charged by the dairy and food commissioners with selling a compound for pure lard, fifteen were fined $50 each and costs. Most of them paid the fine, a few entering bail to answer the charge in court.

Phipps Institute Enlarged.—A second ward in the temporary Phipps Institute for the Study, Cure and Prevention of Tuberculosis was recently opened, and a third ward is in preparation. There are now 32 beds. In the four months of the existence of the hospital nearly a thousand patients have been treated.

Beri-Beri.—Most of the crew of the Dutch bark *Amsterdam* from Java, bound for Philadelphia, were found to be suffering from beri-beri, and, on June 12, were removed from the vessel to the U. S. Marine Hospital at Lewes, Del. The men are said to be in a serious condition. The disease was probably contracted while the vessel was loading at Java. She was thoroughly fumigated and, after obtaining another crew, sailed for Boston.

Unprofessional Surgery.—On the charge of connection with the death of a negress, in which case the coroner's jury returned a verdict of death as a result of unprofessional surgery, Mrs. Elizabeth Ashmead was committed to prison. She is alleged to have figured as "Dr. Conde" of the Conde Specialty Medicine Company. De Witt Ashmead, the woman's son, and Dr. Matthew McVicker were held as accessories, but were released on bail of $2,000 each.

Typhoid and Smallpox.—For the week ended June 13, 238 new cases of typhoid fever were reported, and 48 new cases of smallpox. Of the latter, 33 cases occurred in two wards adjacent to the municipal hospital. It is thought by the health authorities that rats which infest the municipal hospital are largely responsible for carrying the contagion, and active measures are to be taken for their extermination. A house-to-house vaccination has been ordered in the locality.

Vetoes Homeopathic Control.—The mayor vetoed an ordinance passed by councils authorizing the director of the Department of Public Health and Charities to establish wards in the Philadelphia Hospital, to be conducted under homeopathic treatment. The reason assigned was that the ordinance provided that the physicians to be appointed were to be nominated by the Hahnemann Medical College, thus transferring executive power to a college, whereas such power should be vested solely in the executive officers of the municipality.

Pasteurized Milk Plant to be Established.—After inspection of the plants established in New York through the philanthropy of Nathan Straus for supplying pasteurized milk for infants, Director Martin is planning at least one such station in Philadelphia. It is the plan to have the supply in the crowded tenement district, and the distribution made perhaps through the police stations. Prominent women of the city are taking an interest in the project, and will probably lend material aid. The necessary apparatus has been ordered through Mr. Straus.

To Investigate Water Pollution.—On June 16 a number of city officials started on a tour of inspection of the Schuylkill River for the purpose of determining the sources of pollution of the water supply of Philadelphia. The party included Dr. A. C. Abbott, chief of the bureau of health, and Health Officer Charles H. Heustis; also medical inspectors A. A. Cairns, A. C. Butcher, Thomas J. Beatty, Henry Sidebotham, C. P. Mercer and L. C. Wessels, and an equal number of nuisance inspectors. The party went direct to Reading, there boarding a launch and proceeding down the Schuylkill. Officials were landed at intervals to make special examination as to sources of pollution in the vicinity.

TENNESSEE.

Colored Graduates.—Knoxville Medical College, an institution for colored students, graduated a class of 6 on May 30.

Maury Infirmary Reopened.—Dr. John M. Maury, Memphis, has reopened the infirmary on Court street, so long occupied by his father and Dr. Mitchell.

Pure Food in Memphis.—Dr. Heber Jones, president of the Memphis Board of Health, is having examinations of food made, which will probably result in the passage of a pure food ordinance.

Smallpox in Chattanooga.—During May there were 35 cases of smallpox in the city, with no deaths. The vaccination crusade proved a success, and the health authorities feel that they have the situation well in hand.

Personal.—Dr. Richard Douglas, Nashville, has returned from the Madrid Congress.——Dr. William Krauss, Memphis, has opened a school of clinical laboratory methods.——Drs. John T. Irwin and Gilbert T. Abernathy, Paris, have been elected members of the local board of health.——Drs. Edward C. Ellett and Pope M. Farrington, Memphis, have formed a partnership.

Physician Wins Suit Against College.—Dr. James G Crawford, Nashville, who sued the medical department of the University of Tennessee for $750, the sum paid for a professorship in the department, has been successful in his suit. The court held that Dr. Crawford had performed his duty, and that the faculty was wrong in refusing to pay him for the chair and declining to arbitrate.

Physician Shoots Friend.—Dr. John H. Sevier, Brownsville, had been annoyed by unknown individuals who had nailed notes on his door, warning him to leave town, and had committed various depredations. His friends were guarding his house, and on June 8 Dr. Sevier determined to stand guard himself. In the early morning a man approached, did not halt when challenged, and was shot by the Doctor. The victim proved to be a friend who was coming to summon Dr. Sevier professionally. Fortunately, he was not seriously injured.

TEXAS.

Commencement.—The medical department of the University of Texas, Galveston, held its commencement exercises, May 30. Dr. William Keiller delivered the address to the graduating class.

Personal.—Dr. John Preston, Lockart, has been appointed superintendent of the epileptic colony at Abilene.——Dr. H. O. Sappington, house surgeon of the John Sealy Hospital, Galveston, has resigned.

College Incorporations.—Texas College of Physicians and Surgeons, Dallas, capital stock $6,000, by Drs. F. A. Bell, John O. McReynolds, Henry K. Leake and Jesse M. Pace.——Gate City Medical College and School of Pharmacy, Texarkana, capital stock $50,000.

Note on Dallas Commencement.—In The Journal, April 11, regarding the commencement exercises at Dallas Medical College, it was erroneously stated that Rev. D. C. De Witt delivered the address to the class. Dr. Arthur C. Bell of the faculty delivered the address.

Examining Boards Named.—Governor Lanham has named boards of medical examiners from the regular, homeopathic and eclectic schools. The regular board is composed of Drs. J. T. Wilson, Sherman; Joseph W. Scott, Houston; Sam R. Burroughs, Buffalo; Joseph H. Reuss, Cuero; Don J. Jenkins, Daingerfield; Matthew M. Smith, Austin; John H. Evans, Palestine; Stephen T. Turner, El Paso, and John C. Jones, Gonzales.

Asylum Changes.—Dr. Frank R. Ross, Austin, second assistant physician and superintendent of the State Lunatic Asylum, has resigned and left for Europe, June 1. Dr. John Foster succeeds him, and Dr. Louis Kirk comes to the institution as third assistant physician.——Dr. George H. Moody, first assistant at the Southwestern Insane Asylum, San Antonio, has resigned, and goes abroad for further study in Vienna.

WASHINGTON.

Measles is epidemic, according to reports, in Garfield and Seattle.

Thousands for St. Luke's.—The building fund of St. Luke's Hospital, Spokane, now amounts to $16,345.25.

For Illegal Practice.—G. Olin Smith, Spokane, charged with practicing medicine without a license from the State Board of Medical Examiners, pleaded guilty, May 13, was fined $75 and $3.35 costs, and promptly paid the fine.

Personal.—Dr. William L. Ludlow, health officer of Seattle, was given a banquet by his predecessor, Dr. Frank M. Carroll.——Dr. H. A. Wright, Wilbur, has been appointed a member of the State Medical Examining Board, vice Dr. John P. Turney, Davenport, term expired.——Dr. John G. Byrne, formerly of Chicago, but who has been surgeon of volunteers in the Philippine Islands for two years, has opened an office in Everett.

WISCONSIN.

Mount Sinai Hospital Open.—Mount Sinai Hospital, Milwaukee, was formally opened and dedicated, under the auspices of the Jewish Hospital Association, June 7.

Hospital Association Chartered.—A charter has been issued to the Kenosha Hospital Association and all that now remains is to raise the funds necessary to erect, equip and maintain the hospital.

Smallpox.—The secretary of the State Board of Health says that smallpox is on the decrease. During the last week in May 60 cases were reported, all in the northern part of the state.——Milwaukee had 30 smallpox cases under treatment on June 1.

New Graduates.—The Wisconsin College of Physicians and Surgeons, Milwaukee, graduated a class of 23 on May 28. Rev. Judson Titsworth delivered the doctorate address, and Dr. Alfred H. Levings, president of the college, conferred the degrees.——The commencement exercises of Milwaukee Medical College were held May 1. A class of 42 was graduated. Dean Walter H. Neilson presented the class to President William H. Earles, who conferred the degrees and made an address to the graduates.

Personal.—Dr. L. E. Spencer, Wausau, has been appointed a member of the State Board of Health, vice Dr. George W. Harrison, Ashland, term expired.——Dr. J. Russell Eastman has been appointed health officer of Kenosha.——Dr. A. G. Jenner, Milwaukee, has returned from a two years' course of study in Vienna.——Dr. Theodore Koch has been elected health officer of Baraboo.——Dr. Thomas Fitzgibbon, Milwaukee, professor of gynecology at the Wisconsin College of Physicians and Surgeons, has resigned, and will fill the same chair in the Milwaukee Medical College.

GENERAL.

To Try New Leprosy Treatment.—The Hawaiian legislature has appropriated $3,000 to secure the leprosy treatment of Dr. Goto of Japan. It is not claimed that his method is curative, but it is very effective in its alleviating properties.

Conference of Boards of Health.—The conference of state boards of health was held in Washington, June 3 and 4. Twenty-two states were represented, and the conference was a very satisfactory and profitable session. It was agreed that a quarantine against the State of California because of plague is unnecessary because of the sanitary measures taken by the authorities in California. Dr. Walter Wyman proposed a more intimate connection between state boards of health and the United States Public Health and Marine Hospital Service, and the conference adopted a resolution approving the method which he suggested. Dr. Wyman gave an account of the organization and function of the U. S. Public Health and Marine Hospital Service. It is divided into the division of the marine hospital, including the sanatoria for consumptives at Fort Stanton, the division of domestic quarantine, to which are referred all matters relating to national maritime and interstate quarantine stations and regulations and epidemic diseases, and a division of foreign and insular quarantine, to which is assigned the management of our quarantine stations in our outlying possessions and the supervision, inspection, etc., at foreign ports, which is carried on in China and Japan and in various Central American and Mexican ports. The divisions of sanitary reports and statistics and the personnel and accounts are purely administrative. The division of scientific research is a matter of more interest. It has just gotten into new quarters on the grounds of the old Naval Observatory at Washington. To it requests for scientific investigation of special diseases are referred, and all matters of water pollution, etc., of national interest. There is an advisory board, consisting of a number of leading sanitarians, bacteriologists, etc., attached to it, and one of the latest results of the work of this division is especially noted in the report of its chief, Dr. Stiles, on uncinariasis in the southern states. The yellow fever institute and medical corps are also described by Dr. Wyman. The work of the former is still being carried on, investigations are going on at Vera Cruz and elsewhere. The connection of the service with the International Sanitary Bureau of the American Republics is also noticed. In conclusion, Dr. Wyman calls attention to the advisability of further developments of these annual conferences of state and national health authorities and the appointment of committees, which will keep up their organization during the year and receive for further conference such matters as may be referred to them by the surgeon general of the Public Health and Marine Hospital Service. He suggests, for instance, the appointment of committees on sanitary research on the prevention of epidemic diseases, on typhoid statistics, on state legislation, and on education as well as still more special committees on particular diseases, like cholera, plague, yellow fever, tuberculosis, etc.

CANADA.

A New Chief Coroner for Toronto.—The Ontario government has provided for a chief coroner for Toronto, all the other coroners to be known as associate coroners. Owing to the fact that there has been some jostling for cases among these officers in the past, the above step was thought advisable. The salary is fixed at $1,500, and the chief officer will superintend the conduct of all inquests and direct the work of the subordinate coroners.

Compulsory Vaccination Remains in Ontario.—The bill before the Ontario legislature to repeal the compulsory vaccination law has been withdrawn by its promoter, not more than two or three legislators having been found to support it. It was introduced by a legislator whose constituency had recently experienced an outbreak of smallpox, which also produced an outbreak of cranks to a limited extent. It was to appease these that the legislation was introduced.

Keeping Out Diseased Immigrants.—In the hospitals of Quebec City there are now forty-two immigrants suffering from trachoma. These will be deported and will not be allowed to enter the country any farther. It is understood that the new Canadian law with regard to these classes is working very well. It is urged that the governments of the United States and Canada might wisely co-operate, since neither country wants to become a dumping ground for the incompetents and the diseased of the old world, there should be one sea wall along the Atlantic shore, so far as maintaining the health and cleanliness of our peoples are concerned.

Medical School Amalgamation in Toronto.—It is again stated that Trinity University will at last come into federation with the provincial university, and that the medical departments of both Trinity University, formerly Trinity Medical College, and that of the University of Toronto, will also be amalgamated. This would give a very large medical department for the provincial university, and would form a medical faculty the equal of any in America. There are over 200 students in medicine at Trinity and about 400 at Toronto, which would form a student body second to none in Canada. Under the new arrangements it is stated that Dr. W. B. Geikie, who for a long term of years has been dean of Trinity and professor of medicine, will retire. The fused schools will occupy the new medical buildings, now about completed, in connection with the provincial university.

FOREIGN.

Plague in Hongkong.—The plague has spread most seriously in Hongkong. A number of foreigners are victims of the disease. It is reported that six men of the British battleship *Ocean* have been attacked.

Prizes Awarded to Vienna Physicians.—The Vienna Academy of Sciences has conferred the Lieben prize of about $500 on Dr. J. Schafler, professor of histology at Vienna, for his work on "Cartilage and Allied Structures," and his recent studies on comparative anatomy. The Beer prize of $250 was awarded to Dr. A. Kreidl, professor of physiology, for his study of the comparative physiology of the "static sense."

More Plague in Berlin.—Cable dispatches from Berlin announce in the daily press that one of the attendants of the late Dr. Sachs, the victim of bubonic plague, whose death we mentioned last week, is suffering from the disease. He is 22 years of age, has a strong constitution, and may recover. German physicians are much aroused by the action of the government in prohibiting further experimenting with the plague. They say that Dr. Sachs and other experimenters fully understand the risks they take, and, in view of the benefit to the community, the experimenting should not be stopped.

The Brain of Laborde.—Eminent as a medical journalist, physician, exceptionally fluent speaker and inventor of "rhythmic tractions of the tongue" as a means of resuscitation, the late Dr. Laborde of Paris bequeathed his body to science. The *Gaz. Méd. de Paris* of June 6 gives details of the autopsy report. The brain weighed only 1,234 gm. and was asymmetric to a certain extent, while the convolutions were not complicated. The foot of the inferior frontal convolution was much larger on the left side than on the right. It had apparently absorbed the "cape," from which it was separated only by a deep sulcus. Its large size was the more remarkable on account of the smallness of the brain as a whole.

The Rejuvenation of Vichy.—On May 31 Vichy celebrated the completion of the buildings, etc., that have been undertaken on a large scale to place Vichy at the head of European watering places. It is owned by the French government, which recently renewed its contract with a stock company on condition that $2,000,000 should be expended on the place to make it a model of sanitation, hygiene and general resort. The company has expended more than the sum stipulated, and De Lavarenne writes enthusiastically of the results in the *Presse Médicale* of June 3. The place is arranged for wealthy patrons, or for persons of moderate means, according to the schedule desired, and he thinks it far outranks other European health resorts in the most essential points. There were 80,000 visitors last year, and there are now accommodations for many more.

Death of the Famous French Trance Sleeper.—Marguerite Boyenval of Thenelles roused from her long sleep, May 26, five days over twenty years since she sank into her trance. She has been under the medical care of Dr. Charlier, mayor of Origny-Sainte-Benoite, and he found that she was becoming tuberculous and attributes her waking to the inroads of the disease. Her jaws were clenched, and her case has been described as the "summum of the diathèse de contracture" with profound lethargy, mental inertia and physical insensibility. Her mother fed her during these twenty years by peptone in rectal enemata, and through the gap of a broken tooth. A few months ago signs of returning sensibility were apparent. An abscess had to be opened and the muscular contraction gradually subsided and consciousness returned. She was able to answer yes or no to questions, and exclaimed that the physician was hurting her when he took her arm, and asked for her grandfather who has long been dead. She was emaciated to a skeleton, and her weakness was so extreme that the physician advised absolute quiet, and no questions, and she thus passed away. The *Gaz. Méd. de Paris* of June 6 gives further details, noting especially her abundant blonde hair. The autopsy had not been made at the time.

LONDON LETTER.

Typhoid Fever and Army Blankets.

Great consternation has been produced by the report that the blankets used by the soldiers suffering from typhoid fever in the Boer War have been sold and distributed all over the country without being disinfected. The sensational daily papers have made use of the opportunity to diffuse all kinds of wild stories. The facts are as follows: Ten cases of typhoid fever occurred on a training ship for which no cause could be ascertained, attention was then directed to certain blankets recently obtained. Stains on them awakened suspicion, and examination by Professor Klein showed that the blankets contained abundant typhoid bacilli. Inquiry elicited the fact that the blankets were part of a large consignment which had been sent to different localities in England. The London authorities warned the medical officers of health of all the districts concerned, who seized and disinfected all the blankets they could find. It has now been ascertained that the blankets were bought at a military sale in South Africa. But this does not explain how infectious blankets came to be sold, for all bedding from typhoid cases was regularly disinfected. It is surmised that some of the blankets of the large number of sick soldiers sent by rail to the various hospitals may have been left in the railway carriages or at railway stations and collected and sent to the army stores. Two hundred thousand blankets have been sold, of which 160,000 have been traced to 130 towns in Great Britain and Ireland.

Census Returns.

A valuable "blue book," consisting of a summary of the recent census of England and Wales, has just been issued. The first point to attract attention is the tremendous increase of population which has taken place in the past century. In 1801 the population was just under 9,000,000, and in 1901 it was 32,500,000. The increase is entirely due to growth of the urban population. The preponderance of women over men has been increasing for a considerable period, and the "superfluous women" now number over a million. The increase in the number of foreigners, though marked, is quite trivial, compared to the growth of population. The figure rose from 198,113 in 1891 to 247,758 in 1901. The increase is almost entirely among Russians and Italians.

The Plague.

In the weeks ending April 25 and May 2 the deaths from plague in India were 28,146 and 24,333 respectively. The increase of plague in recent years in India is shown by the following figures: The recorded deaths in 1897 were 56,000; in 1897, 56,000; in 1898, 118,000; in 1899, 135,000; in 1900, 93,000; in 1901, 274,000, and in 1902, 577,000. During the first three months of 1903 the deaths amounted to 331,000, and in March alone to 136,000. In Cape Colony, for the fortnight ending May 2, the following have been reported: Port Elizabeth, 8, fresh cases 12, deaths 9; East London, 3 fresh cases and 2 deaths; King Williamstown, 7 fresh cases and 3 deaths.

Correspondence.

THE DEMISE OF THE PHILADELPHIA MEDICAL JOURNAL.

PHILADELPHIA, June 15, 1903.

To the Editor:—The *Philadelphia Medical Journal* was sold out last week by the majority stockholders. As this deal closes an extraordinary chapter in the history of medical journalism in this country, it is desirable that the medical public should learn something about it. As the writer was one of the minority stockholders who were opposed to this deal, and as, moreover, he had been the editor-in-chief of the journal for more than two years, he feels himself qualified to comment on it. The great bulk of the stock of the *Philadelphia Medical Journal* was held by laymen. In fact the journal from its very inception had owed very much to laymen, among whom were men of the highest character, who had supplied money with the unselfish desire to found a medical journal in Philadelphia that should be permanent and representative. That this scheme has failed is no reason why ample acknowledgment should not be made to these generous supporters of what some of them intended should be a free and untrammeled medical press.

Two and a half years ago the *Philadelphia. Medical Journal* reached a crisis in its affairs which led to a change in editorial management. There were many prominent medical men in Philadelphia and elsewhere who were interested in keeping the journal alive; and in spite of the fact that its short career up to that time had been marked by threatening disaster (due largely to the opposing aims and temperaments of men who commanded its various departments), a determined effort was made to rehabilitate the journal and give it a new lease of life. At the same time, however, the command of its stock was allowed to remain in the hands of a few (and a very few) laymen. These stockholders professed—and, no doubt, sincerely—to have only the interests of the medical profession at heart; and they seemed for the time being to realize that nothing but a strict regard for the ethical principles of the medical profession would be tolerated by the medical men who consented to identify themselves with the effort to save the journal for the cause of scientific medicine. At this time it was freely declared, and evidently believed, by some of the business men who had invested in the stock of the journal, that its business affairs were satisfactory and that its stock was worth subscribing to. The new editor-in-chief consented to take charge only with the clear understanding that he was to have absolute control of the editorial pages and of the selection of original articles. The business management, including the advertising department, was not in his control, but the functions of the latter department were lodged in the hands of a committee composed largely of physicians. Later the personnel of this committee was changed.

Under this agreement the editor-in-chief and a staff of very able and conscientious assistants worked with practically no interference for a period of two years. It became known, however, that the business men who practically controlled the business department were not satisfied with the commercial status of the journal, and wished to enlarge the advertising business by removing some of the restrictions that had been imposed. The excuse for this was found in the fact that the journal was losing money. The editorial staff was not consulted, however, about any new scheme, until one day word was sent to the editor-in-chief that the business department had entered into an agreement with some drug firms to accept puff articles from such drug firms and to publish them as original articles. The drugs thus to be exploited were proprietary nostrums. The editor-in-chief, acting for himself and the whole staff, and ably supported by the medical members of the board of trustees, immediately served notice that the publication of such papers would not be permitted, and that the acceptance of them by the business department without the knowledge and consent of the editor-in-chief, was a direct violation of agreement.

In the meantime it transpired that an official of the company, who had been sent to England by the business department, with the consent of the board of trustees, to establish a British edition of the *Philadelphia Medical Journal*, had been negotiating with a large drug firm in London to sell the weekly issue of the journal to said drug firm, who should have the right to use it for any and all advertising schemes in Great Britain that said firm might devise. In other words the journal was to be made the organ abroad of the proprietary drug houses, who would be entirely irresponsible to any persons but themselves. It is needless to say that this scheme had not been contemplated by the board of trustees and was vetoed as promptly as it was discovered by the medical members of the board. Hence this crisis.

One lay stockholder, who held the great bulk of the stock, and practically controlled the business department, now announced that he would give no more financial support to the journal, but would sell out to the first buyer. It also transpired that there was a large deficit in the affairs of the journal, although less than a year before this time the business department had announced in a circular that the company was solvent, and had solicited subscriptions to the stock. When this situation was fully revealed to the editorial staff its members promptly resigned (in April). This resignation was not accepted, but the staff was asked to continue in charge by some medical members of the board of trustees in the hope that the situation could be relieved. Efforts were to be made in retrenchment and in curtailing the expenses of what had been a truly extravagant business management. Last week, however, the announcement was made that the majority stockholders (most of them laymen) had sold out—and the *Philadelphia Medical Journal* practically ceased to exist.

The reasons for this demise, as seen in the above narrative, are to be found in the fact that the journal, under its business management, was losing money, and that the majority stockholders could not control the editorial staff and dictate a commercial policy in accord with the demands of the advertisers. The collapse of the journal, so far as its life in Philadelphia is concerned, is only an illustration of the evil effects that come from a conflict between such opposing interests—interests which represent commercial success on the one hand and professional principle on the other. I think I am justified in saying that few men on the board of trustees, and fewer still on the editorial staff, regret that they assisted at the obsequies of the *Philadelphia Medical Journal* rather than assist it to live and stand in a false position toward the medical profession. I speak of the obsequies, for while the property has been bought by respectable parties in New York, where an attempt will be made to keep the title before the world, the journal is practically dead in the city of its birth.

Many of the minority stockholders had hoped to the last that, by the exercise of rigid economy and an adherence to a high professional standard, their property could be saved and the journal kept alive in Philadelphia, but their hopes have been doomed to disappointment.

James Hendrie Lloyd.

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

PRONUNCIATION OF PHTHISIS.

Las Cruces, N. M., June 3, 1903.

To the Editor:—The Century gives "thy'sis," and Gould "ty'sis" as pronunciations for phthisis. Which is confirmed by more general usage?

J. Frank McConnell.

Ans.—The general pronunciation is "ty'sis" or "te'sis." The following authorities give the pronunciation "thy'sis": Century, Imperial, Stormonth, Walker and Webster. The following give "ty'sis": Encyclopedia, Smart, Dorland and Foster. Dunglison gives "te'sis." The following authorities give more than one pronunciation, with the preference to the first named: Worcester: "thy'sis, ty'sis." Gould: "thy'sis, ty'sis, te'sis." Duane: "ty'sis, te'sis." Standard: "thy'sis, the'sis."

Association News.

Registrations at New Orleans.

A list of those who registered in the various sections at the New Orleans session appeared in The Journal, May 23. A number of errors occurred in this list, some of which have been called to our attention. We have waited before publishing these, that we might collect all that should be referred to. Attention should be called to the fact that many names appeared in sections in which it might not be expected to find them registered. For example, secretaries of some of the sections have written that some of their members were registered in other sections. On investigating the registration cards of these a considerable number are found to have registered just as is recorded. The corrections are as follows: The following names published in the Section on Practice of Medicine should have been credited to other sections.

W. P. Hill, Milwaukee, Wis., Materia Medica.
N. S. Davis, Jr., Chicago, Hygiene.
L. H. Branson, Iowa City, Iowa, Materia Medica.
C. S. N. Hallberg, Chicago, Materia Medica.
S. L. Powlett, Hammond, La., Obstetrics.
J. B. Shelmire, Dallas, Texas, Cutaneous Medicine.
M. L. Heidingsfeld, Cincinnati, Cutaneous Medicine.
A. W. Brayton, Indianapolis, Ind., Cutaneous Medicine.
A. S. Burdick, Chicago, instead of Ophthalmology, should have been Materia Medica.
James P. Parker, New Orleans, instead of Ophthalmology, should have been Laryngology.
A. E. Bulson should have been A. E. Bulson, Jr., Fort Wayne, Ind.

The following names were omitted:

R. C. Myles, New York, Laryngology.
C. M. Robertson, Chicago, Laryngology.
Ramon D. Garcin, Richmond, Va., Practice of Medicine.
Frederick Tice, Chicago, Practice of Medicine.
B. C. Keister, Roanoke, Va., Materia Medica.
H. G. Anthony, Chicago, Cutaneous Medicine.

State Boards of Registration.

Wisconsin Medical Law.—The last Wisconsin legislature modified the medical practice act of that state to a considerable extent. As the law now stands the governor is to appoint a special board of medical examiners, consisting of eight members from separate lists of ten given him by the state medical society, state homeopathic and state eclectic societies respectively, and a list of five from the state osteopathic association. From these he will appoint not more than three regular physicians, nor more than two each of homeopathic and eclectic and one osteopathic, all licentiates in medicine. Their appointment shall be for four years, no member to serve for more than two consecutive terms. The board will meet on the second Tuesday in January at Milwaukee and the second Tuesday in July at Madison, and at such other times and places as it may from time to time determine. It shall keep a record of its proceedings and a register of all applicants.

Section 3 of the law reads in part as follows:

All persons commencing the practice of medicine, surgery or osteopathy in any of their branches in this state, shall apply to said board at the time and place designated by said board or at any regular meeting thereof for license so to practice and shall present to said board a diploma from a reputable college of medicine and surgery or osteopathy. A college to be deemed reputable by this board shall require at least four courses of not less than seven months each before graduation, no two of such courses to be taken within any one twelve months, and that* shall require for admission thereto a preliminary education equivalent to that necessary for entrance to the junior class of an accredited high school in this state, including a one year's course in Latin, and that shall, after the year 1906, require for admission to such school a preliminary education equivalent to graduation from an accredited high school of this state, and shall submit* to an examination in the various branches in medicine and surgery usually taught in reputable medical colleges, *or*, if the applicant be an osteopath, he or she shall present a diploma from a regularly conducted college of osteopathy maintaining a standard in all respects equal to that hereby imposed on medical colleges as to preliminary education, said college after 1904 to give three courses of eight months each, no two courses to be given in any one twelve months, and after the year 1909 such college shall give four courses of seven months each, as hereinbefore provided for medical colleges, and shall pass the regular examination of such board in anatomy, histology, physiology, urinalysis, chemistry, toxicology, dietetics, physical and general diagnosis, hygiene and theory and practice of osteopathy. The examination in materia medica, therapeutics and practice shall be conducted by members of the board representing the school of practice which the applicant claims or intends to follow.

After examination, as hereinbefore provided, the board shall, if it finds the applicant qualified, grant a license to said applicant to practice medicine and surgery in all their branches in this state, or a license to practice osteopathy therein, which license can only be granted by the consent of not less than six members of said board, and which, after the payment of fees, as hereinafter provided, shall be signed by the president and secretary thereof, and attested by the seal of the board. Osteopaths, when so licensed, shall have the same rights and privileges and be subject to the same laws and regulations as practitioners of medicine and surgery, but shall not have the right to give or prescribe drugs or to perform surgical operations. The fee for examination shall be fixed by the board, but shall not exceed $15.00 in each case, with $5.00 additional for the license, if issued. Such fee or fees shall be paid by the applicant to the treasurer of the board and may be applied toward defraying any proper and reasonable expenses of the board: provided, however, that any student who is exempted as a matriculant of any medical college of this state under Chapter 306 of the Laws of 1901, whose name is now on file with the Wisconsin State Board of Medical Examiners, shall, on the presentation of a diploma from any Wisconsin college, and on the payment of the fees specified in this act, and having satisfied said board that he or she is a person of good moral character, be licensed to practice without further examination by such board, provided that said college maintains its standard herein required.

Reciprocity is provided for with other states at the discretion of the board on the payment of the fee fixed by the board, not exceeding the sum of $25.

The provisions of this act shall not apply to commissioned surgeons of the United States Army, Public Health and Marine-Hospital Service, or to physicians or surgeons of other states or countries in actual consultation with resident physicians of this state.

Recording of licenses with the county clerk is required under penalty.

If any person licensed or registered by the board should be convicted of any crime committed in the course of his professional conduct, the court may, in addition to any other punishment imposed, revoke such license or certificate. The board has the power to adopt its own rules for government and require the filling out of such blanks as it may deem necessary, and in its discretion refuse to grant licenses to persons who do not furnish proof of good moral and professional character.

Section 6.—Every person shall be regarded as practicing medicine or osteopathy, within the meaning of this act, who shall append to his or her name the letters "M.D.," "M.B.," or "D.O.," "Doctor," "Dr.," or any other letters or designation with intent to represent that he or she is a physician, surgeon or osteopathist, or who shall, for a fee, prescribe drugs or other medical or surgical treatment or osteopathic manipulation for the cure or relief of any wound, fracture, bodily injury, infirmity, or disease; provided, however, that nothing in this act contained shall be construed to apply to any dentist or resident refracting optician engaged in the practice of his or her profession.

Sec. 7.—It shall be the duty of the Board of Medical Examiners to investigate all complaints in regard to violation, or disregard of, or non-compliance with the provisions of this act and to bring all such cases to the notice of the proper prosecuting officers, and it shall be the duty of the district attorney of the proper county to prosecute all violations of this act.

Sec. 8.—No person practicing medicine, surgery, or osteopathy shall have the right to collect, by law, any fees or compensation for the performance of any medical or surgical services, or fees for any service as an osteopathist, or to testify in a professional capacity as a physician, or surgeon, or insanity expert, in any case, unless he or she holds a license from the Wisconsin Board of Medical Examiners or the certificate of registration hereinbefore referred to, with a diploma from a reputable medical college or society or a certificate of membership in a medical society, and has been duly recorded as a practitioner in the State of Wisconsin; provided, that nothing in this act contained shall be construed as restricting any court in a criminal action from receiving the testimony of any person as a witness.

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* We are not responsible for the grammatical construction; we quote from official printed copy.—Ed.

The act has an emergency clause, and is in force since the date of its approval, May 22, 1903.

Miscellany.

NATIONAL BUREAU OF MEDICINES AND FOODS.

The joint committee of the American Medical and the American Pharmaceutical Associations, presents, in the following statement, the plan for establishing a National Bureau of Medicines and Foods which it has been appointed to consider. In order to aid the committee in coming to a determination as to the proper recommendations to be made to the associations, physicians, pharmacists and manufacturers are requested to express to the committee their opinions regarding the advisability of establishing this proposed bureau, and their reasons for approving or disapproving its establishment. The plan herewith published should be carefully read and considered before opinion or criticism is expressed. The subject is of the greatest importance and the scope and details as set forth in the plan under consideration should be fully appreciated. Kindly forward any criticisms, whether favorable or unfavorable.

The members of the American Medical Association committee are as follows: Drs. E. Eliot Harris, 33 West 93d street, New York; N. S. Davis, Jr., State and Randolph streets, Chicago; Solomon Solis Cohen, 1525 Walnut street, Philadelphia; H. Bert Ellis, Bradbury Block, Los Angeles, Cal., and Philip Mills Jones, 13 West Eighteenth street, N. Y., until July 25; after that date, 31 Post street, San Francisco.

The members of the American Pharmaceutical Association committee are as follows: Dr. H. H. Rusby, 115 West 68th street, New York; Mr. James M. Good, 2348 Olive street, St. Louis; Mr. C. S. N. Hallberg, 358 Dearborn street, Chicago; Dr. A. B. Lyons, 72 Brainard street, Detroit; Mr. S. A. D. Sheppard, 1129 Washington street, Boston.

The chairman of the joint committee is Dr. H. H. Rusby; the secretary is Dr. Philip Mills Jones.

GENERAL STATEMENT OF PLAN.

It has seemed desirable to enumerate a few of the more important evils connected with the lack of standard in pharmaceutical preparations, adulteration of drugs, chemicals and foodstuffs, and the exceedingly complex condition of the many remedial preparations constantly offered to the medical profession.

The Pharmacopeia, in this country, is not a compulsory document. As a result, manufacturers are not obliged to follow it in the preparation of pharmaceuticals, and, as a matter of fact, there is much variation in the strength of their products. Fluid and solid extracts, etc., and many pharmacopeial preparations are made differently by different manufacturers and often are not, as they should be, identical within reasonable limitations. The strength of tinctures made by different manufacturers has been found to vary as much as 70 or 80 per cent. This variation is such that prescriptions filled with one set of products will have a certain appearance and therapeutic effect, but the same prescriptions, when compounded from products of a different manufacturer, will have a different appearance and therapeutic effect.

Chemicals are often adulterated or impure; even reagents marked "C. P." can, in most cases, not be relied on. Lists of chemicals bought in open market and analyzed with the adulterants and impurities commonly found, have been published from time to time and are accessible. The facts are so generally known that it is hardly necessary to enumerate them here. A few illustrations will suffice: Tincture of aconite, practically inert; aristol, containing 65 per cent. of free alkali; phenacetin, containing 90 per cent. of acetanilid; boracic acid, adulterated with three times its weight of borax; "C. P." zinc, containing iron and arsenic in appreciable quantities; hyoscyamin, as pure atropin, etc.

Adulterations of foodstuffs, the use of harmful coloring matters and preservatives, etc., are matters of common repute and have been noticed so many times in connection with proposed and urged national legislation, that only summary comment is needed. Cotton-seed oil is commonly marked olive oil; coffee may be largely chickory; mustard is often not more than 10 or 15 per cent. mustard, the adulterant being corn meal; black pepper is usually adulterated with from 50 to 80 per cent. of foreign material; jellies and jams are seldom what they purport to be; salts of zinc, salicylic acid and the salicylates, borax and boric acid, and other preservatives are very generally employed and not infrequently they are used in harmful quantities. So common is adulteration of foodstuffs that there exists almost complete distrust in the public mind as to the purity of freedom from harmful preservatives, of most common foodstuffs. In the domain of prepared foods there is at the present time no means of determining their composition or suitability for the diets for which the makers recommend and advertise them. It has been found that many foods recommended for diabetics contained starch or sugar in considerable quantities, when the makers claimed absence of these ingredients for their products.

Many of the large number of special preparations that are put on the market and strongly urged on the medical profession, probably are good and have certain well defined uses. But the methods employed by the manufacturers are such as to induce a certain lack of confidence. The physician, as a rule, is not informed of the actual composition of the mixtures he is requested to employ, or if the composition is given it is vague or at best there is only the statement of the interested party—the manufacturer—to rely on. If a physician uses many of these preparations in good faith, and in good faith comments favorably on them, in the medical press—supposing that his comment has not been "blue penciled" by the editor of the journal—he is in great danger of seeing his statement taken and even garbled by the manufacturer, and extensively used for advertising purposes. This if his comment is favorable; if it be unfavorable the manufacturer ignores it entirely.

The prevention of adulteration in drugs, chemicals and foodstuffs, and the maintenance of standard in pharmaceutical preparations, should be a government function. For fourteen years effort has been made to secure proper national legislation for this purpose, but without result. The existence of the evils pointed out is recognized by all, and in view of the failure to secure the requisite national legislation, correction, or attempted correction, of these evils has been suggested through the medium of a proper commission or bureau, established by individual effort. Such a bureau could be formed by the association of professional men on the one hand and of those manufacturers who desire to put out only pure, standard and honest goods on the other hand. It is believed that such an association would be to the very great advantage of the public, and probably to those manufacturers who associated with such a bureau in its proposed work.

At first glance, and until the proposed plan is carefully studied, it would seem that such an undertaking would be impracticable. When carefully studied in detail, however, the plan, though of tremendous magnitude, appears to be so far practicable as to demand further study.

The following (infra) statement of the plan which has been formulated for the purpose of meeting present conditions, of adulteration, lack of standard in pharmaceuticals, confusion in identity of preparations and brands of medicinal mixtures, etc., is herewith presented for your very careful consideration. This statement has been made as short as possible, though the effort to condense has not been permitted to go to the point of eliminating anything necessary for the proper understanding of the subject.

The friendly association of the best in the professions of medicine and pharmacy with large commercial interests, necessarily demands the most careful and cautious treatment that it may be beneficial to the public and to the manufacturer without detracting from the reputations of the professional men who engage on the work by casting suspicion on their motives or their integrity. At the same time, a large amount of work would necessarily fall on the professional side of such an association, and the cost of performing the work would have to be defrayed in some manner. It has seemed no less than right that this cost should be met by those who are commercially interested in and profit from the manufacture of the products which would be considered by such an association. Furthermore, it is vitally necessary that such an association should possess the right to determine who may and may not be received in association, and what products of its associates may receive its attention, and the standards of identity, purity, quality or strength to which these products should comply. It must also be in a position to instruct the public and the professions on matters connected with its work and on subjects that are of sufficient interest to the professions or to the public.

To accomplish these ends and to secure the protection to the professional men who shall be chosen to undertake the work outlined, the following detailed plan has been suggested:

PLAN.

In order to have proper legal and business standing, the work should be done by a corporation. As it is not intended that profit shall be made from the undertakings, the corporation should be a membership and not a joint stock corporation. It is proposed to incorporate under the laws of the state of New York, a membership corporation to be known as the National Bureau of Medicines and Foods.

The membership of this bureau should be of two or more classes. All members of the American Medical Association and the American Pharmaceutical Association should be scientific members of the bureau. The organization should be so effected as to fully protect the American Medical Association and the American Pharmaceutical Association, their agents and all their members, who become members of the proposed bureau, from all possibility of being involved in legal or other complications that might assail the proposed bureau. Those manufacturers whose goods it might be requested to vouch for should be admitted to associate membership, but should have no voice in the control of the bureau.

The control of the bureau should be placed in the hands of a board of ten directors, five elected by each association, one from each association retiring annually and his successor elected for five years. This board of directors, with the exception of its secretary, who should devote all his time to the work, should not receive salaries, but should receive mileage and *per diem* when called on to attend meetings of the board or of its committees. The board should, in consultation with the manufacturer, fix standards of identity, purity, quality and strength, not in conflict with the United States Pharmacopeia, and the manufacturer having agreed to these standards, should contract with the bureau to comply with them until altered by common consent and a vote of the board; and to comply with all rules governing him in the manufacture of his product, such rules having been formulated in consultation between the board and the manufacturer, and accepted by both. An eight-tenths vote of the board should be required to accept or reject any application for associate membership, or to adopt any rule of the bureau, or to accept or reject any product presented by an associate manufacturer for proper control by the bureau. No manufacturer or person employed by any manufacturer of products that might come within the scope of the work of the proposed bureau, and no person engaged in their distribution or sale, should be eligible on the board of directors, unless approved by a three-fourths vote of the council of the American Pharmaceutical Association or a three-fourths vote of the House of Delegates of the American Medical Association, respectively.

By laws should be carefully drawn and adopted by the board and thereafter it should require an unanimous vote of the board to alter or amend them in any way. They should be very broad and general, covering only vital principles, and all details should be formulated in the shape of rules which could be altered or abolished as occasion required, only by an eight-tenths vote of the board

The business side of the bureau should be considered with no less care than that devoted to the scientific side. While it would not be the purpose of the bureau to make money, it should be the aim of its administration to confine the cost to the lowest amount consistent with properly carrying on the work, for in any event this sum would be a large one. Modern business methods should be adopted and one general responsible head appointed by the board of directors Under him should be such persons as may be required to carry on the work under the rules and regulations established by the board, and it should be their duty to see that proper and competent persons only were employed The board of directors as such should not come into direct contact with the business side of the bureau, nor with the commercial interests involved It should act in a supervisorial capacity: it should say absolutely what rules, standards, etc, were to be followed and it should see that a proper business department then carried out these rules.

It should be the purpose of the bureau to work in perfect harmony with the United States government authorities, and especially with the Department of Agriculture. In case of future legislation by the United States government, some of the functions of this proposed bureau might be modified or transferred to the proper government department The ever present hope that such legislation will eventually be enacted should not, however, interfere with the careful consideration of the bureau plan, nor with its acceptance if it be found satisfactory Unless spurred on by some such individual effort many more years may elapse before the enactment of proper national legislation. Some features of the work of the bureau could hardly be assumed by the government; notably the dissemination of accurate and reliable information relative to manufacturers and their products, and especially to newly discovered remedial agents, etc, together with a proper ethical supervision of advertising matter connected with the introduction of such products

Existing laboratories should be utilized so far as practicable in prosecuting the work of the bureau, in making its original investigations, and in carrying on the work of check control, for two reasons First, in order to incur no greater expense than absolutely necessary, second, in order to encourage scientific enterprise where now already organized

The bureau should not issue blanket certificates Each package of any product that is manufactured under the supervision of the bureau and which complies with its rules and standards, and for which compliance some individual expert is responsible, should, however, bear a label setting forth that fact for the benefit and guidance of the purchaser

No nostrum, nor any medicinal product of which the full formula giving all the active ingredients and couched in the ordinary terms of chemistry and pharmacy has not been or is not freely published, should at any time be permitted to come within the supervision of the bureau

DETAIL METHOD OF OPERATION.

Any manufacturer desirous of having one or more of his products placed under the supervision of and certified by the bureau would first apply to the secretary for associate membership, which application would carry with it a contract to abide by the rules of the bureau (Appendix A) The application would then be submitted to the board of directors, and on the written approval of a majority of them, such manufacturer would be accepted in associate membership

An associate member desiring to have a given product certified by the bureau, would transmit to the secretary a proper application for that purpose, together with two samples of the product in question. One of these samples should be sealed and deposited in the custody of the secretary; the other should be transmitted to the scientific department of the bureau, together with instructions to fully investigate the article, and to compare it with at least two samples bought in open market without the knowledge of the manufacturer. When the scientific department has obtained all the information desired by the board of directors, it would transmit the same to the board, who would then consider it in connection with the application If found satisfactory, the board, in conjunction with the manufacturer, would determine standard of identity, purity, quality and strength, to which this product should thereafter comply, and would formulate rules acceptable alike to the board and to the manufacturer, for the guidance of the chemists of the manufacturer on the one hand, and of the scientific department on the other (Appendix D).

These formalities having been complied with to the satisfaction of the board of directors, the manufacturer would then be authorized to print on the label of each package of each batch of the product that had been approved by the expert or experts in charge or to attach to each such package a separate paster, setting forth the fact that the contents of that unbroken original package had been certified by the bureau under certain rules; and the manufacturer might also print thereon the text of these rules. Each and every such label or paster should bear a number which would indicate, through records to be kept by the bureau, the date of the particular batch and the expert or experts responsible for having approved the standard thereof At least two samples of each batch should be kept by the bureau for a period to be determined by the board

At least three times each year two samples of each and every product bearing the certificate of the bureau would be purchased in open market, in different localities, and submitted to careful examination by the scientific department of the bureau, in order to determine whether the standard established was being maintained by the manufacturer. If the standard established was not being maintained, the certificate of the bureau should be withdrawn

Unless all of the products of any manufacturer were certified by the bureau, such manufacturer should not be permitted to advertise that his products were certified by the bureau, but in all advertisements of any certified products, he should state that such products were *certified. If all his products were placed under the supervision of the bureau, he might so advertise.*

An associate member who might desire to contract with the bureau to submit any and all advertising matter relative to one or more certified products to the censorship of the bureau, could do so (Appendix C). The bureau would then undertake to place the censored and approved information concerning such products before the physicians and pharmacists of the country in a dignified and strictly ethical and professional manner. These statements would and could with safety be relied on by all the professional interests, for they would practically be the statements not of the interested manufacturer, but of the disinterested board of professional men, composing the board of directors of the bureau. Careful inquiry among a large number of physicians has revealed a unanimous desire to receive such accurate and reliable information from a wholly disinterested source. Statements issued by the bureau would receive attention where statements issued by the interested manufacturer would not be read at all, or even if read, would be regarded with a certain amount of natural distrust. It is not proposed that the bureau shall deliver official opinions as to the therapeutic value of any products; it would simply certify to their compliance with certain standards or to certain formulas The statements which it could disseminate regarding such products would be confined to statements of fact regarding origin, composition, chemical and physiologic action, etc, and the opinions of qualified students and investigators which it might collect and diffuse for the benefit of all who might desire to investigate or make use of such products.

THE OPERATION AS APPLIED TO RETAIL PHARMACISTS

It is proposed that the retail pharmacist shall associate with the bureau on a sound professional basis. In every way possible the bureau should endeavor to aid and improve the profession of pharmacy, and to make more cordial the relations between physicians and pharmacists. To this end the following general plan is submitted for discussion and careful consideration.

Any pharmacist who so desired could become an associate member of the bureau on application, contracting to obey and abide by the rules of the bureau. Rules governing him in the preparation of pharmaceuticals would be, as far as possible, similar to the rules governing the manufacturer and a system consisting of careful and frequent inspection and analytic check control would be established, as in the case of the manufacturer, in order to protect the bureau certificate Such associate pharmacists would agree to supply products certified by the bureau, when not otherwise called for, and the physicians would be advised of all associate pharmacists in their immediate vicinity. The bureau would also endeavor to have physicians call for products certified by the bureau, and whenever not absolutely necessary refrain from specifying particular brands or makes, requiring only that the materials used by the pharmacist should be of the standards established by the bureau and certified by it.

It is hardly necessary to call attention to the very wide differences in the commercial relations of manufacturers and pharmacists to the medical profession. Obviously the problems attendant on these differences would have to be met by the bureau by the formation of different classes of rules and by different forms of inspection. The detail work in connection with the undertaking as applied to the pharmacist, would necessarily be very great, and for the sake of proper treatment of the pharmacist himself, it should not be undertaken until the bureau had been established on a conservative basis It should, however, be undertaken at the earliest practicable time

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APPENDIX A

APPLICATION FOR ASSOCIATE MEMBERSHIP

.... [place and date]

A B, the undersigned, engaged in the business or occupation of .... [manufacturing pharmaceuticals, pharmacy, etc.], herewith makes application for associate membership in the National Bureau of Medicines and Foods, and if duly elected under the by laws of said National Bureau of Medicines and Foods to associate membership therein, will, and does by these presents formally enter into and agree to the following contract and agreement with the said National Bureau of Medicines and Foods, to wit, as follows:

(1) To abide and be governed by all the rules and regulations of the said National Bureau of Medicines and Foods now existing or which may be enacted with the following proviso and exception:

If at any time the said National Bureau of Medicines and Foods shall enact any rule or regulation to which the undersigned can not subscribe or comply, the undersigned may voluntarily withdraw from such associate membership, and the said National Bureau of Medicines and Foods shall make public acknowledgment of the voluntary withdrawal of the undersigned

(2) To submit without litigation to the decision of eight-tenths of the board of directors of the said National Bureau of Medicines and Foods to the construction to be placed on any and all rules or regulations herewith accepted and subscribed to, and to the decision of eight-tenths of the said board of directors, if the violation of any of the said rules and regulations by the undersigned becomes at any time a matter at issue.

(3) To pay to the said National Bureau of Medicines and Foods the sum of five dollars per annum, payable in advance on the second day of January of each year, to the treasurer of the said National Bureau of Medicines and Foods, and failure to make such payment, as provided in the by laws of the said National Bureau of Medicines and Foods, shall terminate the associate membership of the undersigned.

[Signed] ....

[To be acknowledged before a notary.]

On vote of the board of directors.................................
was duly elected to associate membership on ....[date]...

[Signed] ....Secretary.

[Seal of the bureau.]

APPENDIX B.

APPLICATION FOR CERTIFICATION.

.... [place and date]

A. B, hereafter referred to as the party of the first part, herewith makes application to the National Bureau of Medicines and Foods, hereafter referred to as the party of the second part, to have the standard of identity, purity, quality and strength of .... (product or products to be specified) manufactured by the party of the first part, certified by the party of the second part, and for that purpose enters into, makes and acknowledges the following contract:

(1) The party of the first part agrees to comply strictly with all the rules or regulations now or hereafter enacted by the party of the second part governing the standards of identity, purity, quality and strength of the .... manufactured by the party of the first part, and all other rules or regulations at any time enacted by the party of the second part.

(2) The party of the first part agrees to accept, without litigation, the ruling by eight-tenths of the board of directors of the party of the second part, on any question of failure, refusal or neglect to comply with the standards of identity, purity, quality or strength, or failure, refusal or neglect to comply with any of the said rules or regulations.

(3) This contract shall not take effect until any and all experts in the employ of the party of the first part, and who are in charge of and responsible for the manufacture of .... manufactured by the party of the first part, shall be associate members of the party of the second part, and shall have entered into a contract with the party of the second part to strictly comply with all rules or regulations of the party of the second part, and to certify only to such batches of the .... manufactured by the party of the first part, as do actually and truthfully comply with the standards of identity, purity, quality and strength established by the party of the second part, hereby agreed to by the party of the first part.

(4) (To apply to such products as can not be assayed or analyzed.) The party of the second part shall have the right to have its duly qualified and authorized inspector inspect the material employed and the process of manufacture of .... by the party of the first part, at any or all reasonable time or times, and either with or without due notice to the party of the first part.

(5) Not oftener than four times a year the board of directors of the party of the second part shall determine the percentage of ratio which the cost of conducting the work of the party of the second part bears to the value of all the products certified by it for a given time, and the party of the first part agrees to pay to the party of the second part a sum equal to this percentage of the total value of .... which has been certified for the party of the first part by the party of the second part, during the time specified. The party of the second part agrees that this percentage assessment shall not exceed [percentage to be determined] of the value of .... certified during that time. The value of the products on which this assessment shall be based shall be considered as and estimated from the list price demanded by the party of the first part for ....

[Signed] ....

[Signatures of two witnesses. Acknowledged before a notary.]

Accepted, National Bureau of Medicines and Foods.

................................., President.

.................................Secretary.

Note.—There will doubtless have to be a number of special contracts covering special cases: this is suggested as a tentative form for the majority of products.

Appendix C.

CONTRACT COVERING ADVERTISING CENSORSHIP.

..................[place and date.]

A. B., the undersigned, an associate member of the National Bureau of Medicines and Foods and manufacturer of .... a product manufactured under the supervision and certificate of the said National Bureau of Medicines and Foods, hereby agrees and contracts to submit any and all advertising matter or general or public statements relative to the said product to the censorship of the board of directors of the said National Bureau of Medicines and Foods, and further agrees and contracts not to make, nor permit, nor cause to be made, any advertisement or general or public statement in regard to the said product that has not been submitted to the said board of directors and approved by a majority thereof. In consideration for the agreement and contract hereby made by the undersigned, ..., the National Bureau of Medicines and Foods agrees to make or to authorize to be made and issued under its name or with its full approval and sanction, any and all such advertising or general or public statements relative to the said product, as shall have been submitted to its censorship and have met its approval.

[Signed] ....

Appendix D.

SUGGESTED RULES.

Rule A. The standards of identity, purity, quality and strength of the official raw materials used in the manufacture, and of the official finished manufactured product, for all substances or products recognized by and manufactured under this rule, shall be those of the United States Pharmacopeia, as indicated in the last published edition of that work.

Rule B. No manufacturer shall advertise or make any general or public statement to the effect that his products are certified by the National Bureau of Medicines and Foods or are placed under the supervision of the National Bureau of Medicines and Foods unless all of the said manufacturer's products have been accepted by the said National Bureau of Medicines and Foods for such supervision and control.

Rule C. In all advertisements or general or public statements made by a manufacturer concerning any product manufactured by him under the supervision of the National Bureau of Medicines and Foods and certified by it, the statement shall be made that such product is certified by the National Bureau of Medicines and Foods.

Rule D. The president and general manager, acting conjointly, may at any time notify any associate member to immediately discontinue the use of the certificate of the National Bureau of Medicines and Foods, on sufficient evidence of departure from the standards of identity, purity, quality or strength of any product manufactured by such associate member, or for failure, refusal or neglect of such associate member to comply with or obey any rule or regulation of the National Bureau of Medicines and Foods. Such associate member may, however, appeal to the board of directors of the National Bureau of Medicines and Foods for decision in the matter or matters at issue, and the decision of eight-tenths of the said board shall be final.

Rule E. Each and every package of every product certified by the National Bureau of Medicines and Foods shall bear the following certificate, which may be printed on the label customarily used or be placed thereon in the form of a separate paster, at the pleasure of the manufacturer, together with the device of the bureau:

"The contents of this original unbroken package are certified to comply with the rules and standards of the National Bureau of Medicines and Foods."

The manufacturer may also, if he so elects, print on such label or paster, the text of the special rules governing the standard of his product so certified.

Each such label or paster shall also bear the device of the bureau.

Rule F. Each and every label or paster fixed to every package of a certified product (except in such cases as may be covered by a special rule), shall have printed thereon a number which will be so determined as to indicate, through the records of the manufacturer and of the bureau, the particular batch, the date of its manufacture and the name or names of the expert or experts who is or are responsible for certifying to the standards of identity purity, quality or strength of that particular batch.

Marriages.

Oram Brown, M.D., to Miss Florence Foley, both of Chicago, June 10.

David P. Schindel, M.D., to Miss Emma Leah Eyerly, at Hagerstown, Md., June 3.

Ira M. Washburn, M.D., to Miss Mary Elsie Watson, both of Rensselaer, Ind., June 10.

Edward K. Lockwood, M.D., to Miss Stella Josephine Gelder, both of Virden, Ill., June 3.

Virgil O. Hardon, M.D., Atlanta, Ga., to Miss Florence Talbot of Eatonton, Ga., June 3.

Zenas Fearing, M.D., to Miss Emily Hollowell, both of Elizabeth City, N. C., May 27.

Benjamin Gleeson, M.D., Danville, Ill., to Miss Kathryn Mae White of Chicago, June 17.

Lee Bernard Boyers, M.D., to Miss Nellie Margery Fleming, at Fairmont, W. Va., June 4.

David H. Lewis, M.D., Akron, Ohio, to Miss Juanita Blanche Sigler of Hayesville, Ohio, May 12.

Richard A. Urquhart, M.D., Baltimore, to Miss Helen Dunlop of Washington, D. C., June 10.

James T. Rugh, M.D., Philadelphia, to Miss Eleanor H. Stevenson of Abington, Pa., June 3.

John W. Hairgrove, M.D., Jacksonville, Ill., to Miss Mabel Marvin of Madison, Wis., June 20.

Graham E. Henson, M.D., to Miss Marion Eugenie Anderson, both of St. Clair, Mich., June 3.

Harry V. Prescott, M.D., Dallas City, Ill., to Miss Lucretia Quinton of Denmark, Iowa, June 14.

Charles P. Maddux, M.D., to Miss Haddie Clark, both of Santa Rosa, Cal., at San Francisco, May 29.

Hiram L. Randall, M.D., Shubert, Neb., to Mrs. Sarah E. Myers of Aurora, Neb., at Julesburg, Colo., June 6.

Peter Conover Field, M.D., Fort Robinson, Neb., to Miss Cornelia Emmet Voorhees of Morristown, N. J., June 4.

Deaths.

Robert Boal, M.D. Medical College of Ohio, Cincinnati, 1828, a member of the American Medical Association; one of the founders of the Illinois State Medical Society; prominent in politics before the Civil War; a friend of Lincoln, Douglas, Baker and Hardin; a member of the legislature when Lincoln was a candidate for the United States Senate; one of the oldest practitioners in the west, died at the home of his daughter in Lacon, Ill., June 12, aged 96.

Albert Thomas Henley, M.D. New York University, 1869, medical inspector of state convicts for twelve years; some-time president of the Jefferson County (Ala.) Medical Association; senior councilor of the Medical Association of the State of Alabama, died at his home in Birmingham, June 2, from Bright's disease, after an illness of four years, aged 54.

William A. Caldwell, M.D. Columbian University, Washington, D. C., 1892, formerly of Washington, D. C., a specialist in diseases of the eye, ear, nose and throat, and for two years professor of anatomy and physiology in the University of West Virginia, died, June 6, from consumption, at Rockville, Md., aged 41.

John Frederick Golding, M.D. College of Physicians and Surgeons, New York, 1875, professor of toxicology and of the theory and practice of pharmacy in the Brooklyn College of Pharmacy, died suddenly at his home in Brooklyn, from heart disease, June 7, aged 48.

J. Robert Straw, M.D. College of Physicians and Surgeons, Baltimore, 1887, a member of the American Medical Association, committed suicide at his residence in Ashland, Wis., June 2. by cutting his throat while despondent.

Charles T. Pepper, M.D. University of Virginia, Charlottesville, 1855. a surgeon in the Confederate service during the Civil War, died at his home, Grassland, near Rural Retreat, Va., May 28, after a lingering illness, aged 74.

Theophilus J. Batchelder, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1871, of Machias, Me.. was found dead, May 26, on a steamer between Portland and Boston, presumably from heart disease.

Julius A. Crane, M.D. Cleveland Medical College, 1870, formerly superintendent of the Agnews (Cal.) State Hospital for the Insane, died suddenly at his home in Santa Ana, June 6, from heart disease, aged 58.

Richard Blair Conn, M.D. Bellevue Hospital Medical College, New York, 1852, for many years a practitioner in Indiana and Illinois, died at his home in Tacoma, Wash., June 1, from heart disease, aged 79.

Frederick A. Remington, M.D. College of Homeopathic Medicine, University of Iowa, Iowa City, 1884, died at the Samaritan Hospital, Sioux City, Iowa, from myelitis, after an illness of three days, aged 50.

John M. Brooke, M.D. University of Virginia, Charlottesville, 1888, of Portland, Ore., died at St. Vincent's Hospital in that city, May 24, from shock following operation for mastoid abscess, aged 37.

Charles J. Wright, M.D. Cleveland Homeopathic Medical College, 1898, of Glenville, Ohio, died at the Huron Street Hospital, Cleveland, June 1, from typhoid fever, after an illness of five days, aged 28.

David A. Pletts, M.D. McGill University, Montreal, 1879, of Brunswick, Me.. died at the Eye and Ear Infirmary, Portland, June 7. from injuries received at Deering Junction, June 5.

Leonidas F. Calhoun, M.D. Kentucky School of Medicine, Louisville, 1885, of Black River, near Jonesville, La., was drowned by his team running away into a river, June 2.

James S. Hall, M.D. College of Physicians and Surgeons, Boston, 1897, died at his home in Worcester, Mass., June 2, from heart disease, after an illness of one year, aged 46.

Augustine Thompson, M.D. Hahnemann Medical College, Philadelphia, 1867, of Lowell, Mass., died in a hospital in Boston, June 8, after an operation for carbuncle, aged 68.

Jacob R. Plank, M.D. Washington University School of Medicine, Baltimore, died at his home in York Springs, Pa., May 27, from paralysis, after an illness of five days, aged 76.

O. L. Watson, M.D. University of Vermont, Burlington, 1861, who retired from active practice in 1890, died at his home in Montpelier, Vt., May 25, from neuralgia, aged 75.

Curtis E. Marryot, M.D. New York University, 1866, died at his home in North Kingstown, Wickford, R. I., May 29, from paralysis, after an illness of two days, aged 62.

Edwin K. Fernsler, M.D. Jefferson Medical College, Philadelphia, 1867, died at his home in Terre Hill, Pa., May 22, from dropsy, after an illness of four years, aged 61.

Louis B. La Count, M.D. Rush Medical College, Chicago, 1868, died at his home in Merrill, Wis., May 25, from injuries received in a fall several weeks before, aged 60.

Ira Van Camp, M.D. Eclectic Medical Institute, Cincinnati, 1867, said to have been the oldest practitioner in Nebraska, died at his home in Omaha, June 1, aged 74.

Elbert Sevier Miller, M.D. Transylvania University, Lexington, Ky., 1846, died at the home of his son, Dr. E. S. Miller, Jr., Johnson City, Tenn., June 6, aged 83.

Edgar M. Smith, M.D. Rush Medical College, Chicago, 1891, a member of the American Medical Association, died at his residence in Chicago, May 11, aged 40.

Ethan Allen Riggs, M.D. Tulane University, New Orleans, 1898, of Biloxi, Miss., died in New Orleans, May 28, from consumption, after a long illness, aged 42.

John Gillespie, M.D. University of Pennsylvania, Philadelphia, 1880, of Warrensburg, N. Y., died at Silver City, N. M., May 26, from tuberculosis, aged 44.

Frederick W. Ruby, M.D. University of Louisville, 1886, died at his home in Louisville, from acute tuberculosis, June 7, after an illness of four months, aged 37.

Fiske Holbrook Day, M.D. Jefferson Medical College, Philadelphia, 1849, a pioneer physician of Milwaukee, died at Lansing, Mich, May 30, aged 77.

Chester Howard, M.D. University of Buffalo, 1879, died at his home in Dayton, N. Y., May 27, from spinal disease, after an illness of two years, aged 55.

Leonard S. Rice, M.D. Medical College of Ohio, Cincinnati, 1869, of Springfield, Ohio, died suddenly in that city, May 25, from heart disease, aged 72.

John W. Sykes, M.D. Hahnemann Medical College, Philadelphia, 1855, of Pittsburg, died at Ocean Grove, N. J., May 29, after a long illness, aged 76.

David McLellan, M.D. Hahnemann Medical College, Chicago, 1880, died at his home in West Hoboken, N. J., June 1, after a month's illness, aged 68.

James E. Warner, M.D. Berkshire Medical College, Pittsfield, Mass., 1853, died recently from paralysis at his home in Sterling, Va., aged 79.

Charles D. Parsons, M.D. University of Michigan, Ann Arbor, 1878, of Burr Oak, Mich., died recently in the west, from the effects of an accident.

Albert Wilson, M.D. *Medical College of Ohio, Cincinnati*, 1851, died suddenly at his home in Sidney, Ohio, June 2, from heart disease, aged 77.

Joseph H. Hilton, M.D. Miami Medical College, Cincinnati, 1874, died at his home in Maywood, Ill., May 27, from heart disease, aged 67.

Madison A. Kelly, M.D. Jefferson Medical College, Philadelphia, 1876, died at his home in Lewiston, Idaho, May 27, aged 75.

Richard P. Evans, M.D. Yale Medical School, New Haven, Conn., 1850, died at his home in Franklin, Ohio, May 31, aged 74.

W. C. Bateman, M.D. Atlanta (Ga.) Medical College, 1891, died at his home in Butler, Ga., June 5, after a long illness, aged 32.

William Thompson, M.D. Castleton (Vt.) Medical College, 1814, died at his home in Luzerne, Pa., May 28, aged 80.

P T. Beeman, M.D., 1856, died at his home in Peachland, N. C., May 23, after an illness of one week, aged 68.

Joseph L. Carr, M.D., a retired physician of Clarksburg, W. Va., died at his home, June 9, aged 85.

E. B. Roberts, M.D., died at his home in Mount Erie, Ill., May 11.

Death Abroad.

Dr. Milan Sachs of Vienna, engaged in bacteriologic work at the Institute of Infectious Diseases, Berlin, died from plague in an isolation hut at Berlin, June 6.

Medical Organization.

The Indiana State Medical Society.

The Indiana State Medical Society met in annual session at Richmond, June 4, and on the following day adopted the plan of organization recommended by the American Medical Association without modification, and by a unanimous vote. The profession of no other state was found better prepared for an intelligent consideration of this subject. This was largely due to the fact that this was one of the pioneer states in making the county societies the units of organization, and in making membership in those a condition to membership in the state society. While no special efforts appear to have been made to build up the county societies, aside from the bare adoption of this provision, and many counties remain wholly unorganized, and in many others such societies have had only a nominal existence, over 1,600 of the 5,000 physicians of the state were enrolled as members. As this is a better showing than had been made by any other state when the present movement began, excepting Alabama, a general desire was expressed to take advantage of any methods which would keep the profession of the state in the front ranks in the work of organization. In addition, President Berteling and other leading members, who had the full confidence of the society, had studied the proposed plan carefully, and were earnest in commending it.

It was decided to put the new constitution and by-laws for both the state and county societies in the hands of every physician in Indiana at once, and a strong council, composed of thirteen members, was selected to carry on the work during the year.

The following is a list of the officers and councilors: President, Dr. Jonas Stewart, Anderson; vice-president, Dr. Charles A. White, Danville; secretary, Dr. Frederick C. Heath, Indianapolis; assistant secretary, Dr. C. T. Hendershot, Cannelton; treasurer, Dr. Albert E. Bulson, Fort Wayne; delegates to American Medical Association, Drs. Edwin Walker, Evansville; David C. Peyton, Jeffersonville; William N. Wishard, Indianapolis, and G. W. H. Kemper, Muncie; councilors, first district, Dr. William R. Davidson, Evansville; second district, Dr. George Knapp, Vincennes; third district, Dr. C. T. Hendershot, Cannelton; fourth district, Dr. George T. MacCoy, Columbus; fifth district, Dr. Myron A. Boor, Terre Haute; sixth district, Dr. John C. Sexton, Rushville; seventh district, Dr. William N. Wishard, Indianapolis; eighth district, Dr. G. W. H. Kemper, Muncie; ninth district, Dr. Paul J. Barcus, Crawfordsville; tenth district, Dr. George F. Keiper, Lafayette; eleventh district, Dr. Robert Hessler, Logansport; twelfth district, Dr. Albert E. Bulson, Fort Wayne, and thirteenth district, Dr. Charles A. Dougherty, South Bend.

Although a strong body and representing a profession above the average, this society has labored under distinct disadvantages, which would be readily appreciated by any one who had opportunity to compare its proceedings with those of similar organizations in other states.

Its sessions lasted but two days, and, as all business was transacted in the general meeting, the time for scientific work was very limited. The program was crowded with excellent papers, but many of these could be read only by title, and, more important, the discussions, which were of high character, were greatly abridged. As both the total membership and attendance are likely to be doubled during the year, even with a business body to take charge of everything except the scientific work, a friendly critic may be permitted to suggest that the interest and usefulness of the state organization might be greatly increased by extending the session to three days.

J. N. McCormack.

Reorganization in North Carolina.

The visit to the annual meeting of the State Society of North Carolina was made a pleasant duty. The meeting was held at Hot Springs, one of their delightful mountain resorts, on June 1, 2 and 3. The attendance was fair, and representative. At the outset, the opposition to the adoption of the new plan of organization was formidable and determined. This came chiefly from the older members, a very conservative element, several of them ex-presidents of the society, who had given no great attention to the subject, but were opposed to anything which disturbed the existing order of things. On the other hand, the officers and the younger members, the latter being in the large majority, who having informed themselves on the merits of the new methods and of their successful operation in other states, were enthusiastically in favor of their adoption. After full consideration and discussion, extending over the greater part of the two first days, the new constitution and by-laws were unanimously accepted by a rising vote, on motion gracefully made by those who had led the opposition.

The reluctance of some to consent to any change in their methods of organization was easily explained when one was informed as to the history of medicine in North Carolina. In 1859, under the auspices of the state society, it was the first state in the Union to enact a really effective medical law, and members of the examining board had always been appointed on nominations made by the society. Examinations were always held at the place of meeting, and a few days preceding the first day of the society, and, so far as possible, all successful applicants were induced to become members. Much the same relations had always existed between the society and the State Board of Health, and members had grown up to consider these three bodies, the North Carolina Medical Society, the State Board of Medical Examiners, and the State Board of Health, as inseparable, and to feel a commendable and jealous pride in an organization which had secured and maintained such high standards through all these years, when most other states were yet over-run with quackery. It was perfectly natural that those who had taken a leading part in making such a history possible should demand the fullest explanations before consenting to change the organic law under which it had all been done. As soon as it was made evident to them that the more complete organization proposed, and for which their profession had been in training, would confirm and strengthen the law, and all of the other worthy interests of their profession and people, they were as earnest in its support as those who had advocated it from the first.

Before final adjournment the state was divided into convenient districts, according to the lines of transportation, and the following councilors were appointed to take immediate charge of the work of organizing county societies: First district, Dr. Oscar G. B. McMullan, Elizabeth City; second district, Dr. David T. Tayloe, Washington; third district,, Dr. Frank H. Russell, Wilmington; fourth district, Dr. Albert Anderson, Wilson; fifth district, Dr. Jacob F. Highsmith, Fayetteville; sixth district, Dr. Hubert A. Royster, Raleigh; seventh district, Dr. Edward C. Register, Charlotte; eighth district, Dr. Henry S. Lott, Winston; ninth district, Dr. Thomas E. Anderson, Statesville, and tenth district, Dr. James A. Burroughs, Asheville.

The officers elected for the coming year are in hearty accord with the council and the Association plan, and are as follows: Dr. H. Bascom Weaver, Asheville, president; Dr. J. Howell Way, Waynesville, secretary, and Dr. Ginnada T. Sikes, Crissom, treasurer.

J. N. McCormack.

Memphis and Shelby County (Tenn.) Medical Society.

On June 10 this society received its charter from the Tennessee State Medical Association.

Schuyler County (Mo.) Medical Society.

The physicians of Schuyler County met in Lancaster recently and organized a county medical society.

Hardin County (Ohio) Medical Society.

This society reorganized at Kenton, May 22, and elected the following officers: Dr. C. C. McLaughlin, Dunkirk, president; Drs. Ezra B. Hiestand and Jesse Snodgrass, Kenton, vice-presidents, and Dr. Harry D. Belt, Kenton, secretary and treasurer.

Cedar County (Iowa) Medical Society.

Ten physicians of Cedar County met in Tipton, May 6, and organized a county medical society, with the following officers: President, Dr. L. W. Baker, Stanwood; vice-president, Dr. H. R. Chapman, Bennett; secretary, Dr. Roscoe A. Nash, Tipton, and treasurer, Dr. Louis J. Leech, West Branch.

Rapides (La.) Medical Society.

A number of physicians of Rapides Parish met at Alexandria, May 18, and organized a medical society, with the following officers: Dr. W. W. Ashton, Alexandria, president; Drs. Buford L. Bailey, Doland, and John D. Everett, Lecompte, vice-presidents; Dr. Cyriaque J. Gremillion, Alexandria, secretary, and Dr. John L. Wilson, Alexandria, treasurer.

Jackson County (Miss.) Medical Society.

On June 6, eight physicians of Jackson County met at Scranton, and organized a county medical society in conformity with the plan suggested by the American Medical Association. Dr. Benjamin F. Duke, Pascagoula, was elected president; Dr. James T. Evans, Scranton, vice-president, and Dr. Jacob N. Rape, Moss Point, secretary and treasurer.

Schoolcraft County (Mich.) Medical Society.

Dr. Theodore A. Felch, councilor of the Michigan State Medical Society, met with the physicians of Schoolcraft County at Manistique, and organized a county society to be in affiliation with the state association. Dr. John H. Cole was elected president; Dr. Frank Rainie, vice-president, and Dr. John M. Sattler, secretary and delegate to the state society.

Napa County (Cal.) Medical Society.

The physicians of Napa County met at Napa, May 28, organized a county society on the lines suggested by the American Medical Association, and adopted a constitution and by-laws. Dr. E E. Stone, Napa, was elected president; Dr. William H. Leach, Napa, vice president; Dr. J. L. Arbogast; St. Helena, secretary, and Dr. William W. Rumsey, Yountville, treasurer.

Reno County (Kan.) Medical Society.

Twenty physicians of Reno County met at Hutchinson, May 20, and organized a medical society, with the following officers: Dr Samuel H Sidlinger, Hutchinson, president; Drs Clemens Klippel, Hutchinson, and William H Bauer, Sylvia, vice presidents; Dr. Claude Mayfield, Hutchinson, secretary; Dr. Armandellie S. Cone, Hutchinson, assistant secretary, and Dr. W. V. Tucker, Huntsville, treasurer.

State Medical Society of South Dakota.

The twenty-second annual meeting was held in Mitchell, May 27 and 28. The plan of organization suggested by the American Medical Association was adopted, and the state divided into nine councilor districts Dr. Byron A. Bobb, Mitchell, was elected president, Dr Charles B Mallery, Aberdeen, vice president; and Dr. James L Stewart, Irene, secretary-treasurer. The 1904 meeting will be held in Redfield.

Christian County (Ky) Medical Society.

This society met at Hopkinsville, June 6, to reorganize under the American Medical Association plan Dr H. H Wallace was elected president, Dr F Manning Brown, vice president, and Dr. Benjamin F Eager, secretary and treasurer, all of Hopkinsville Drs Thomas L Bacon, Jacob M Dennis and Ephraim P. Russell, all of Hopkinsville, were elected as a board of censors Dr Benjamin F Eager was elected as delegate to the state association. The new society starts with a total membership of 37, and every promise for success

Societies.

Bayonne (N. J.) Medical Society.—At the annual election, May 22, Dr George H. Sexsmith was made president; Dr. John T. Connelly, vice president, and Dr Stanley R. Woodruff, secretary and treasurer

Detroit Physicians' Association.—At the meeting, April 27, Dr. Daniel Kerr was elected president, Dr Henry L Obetz, vice president; Dr Walter J Cree, secretary, and Dr Stephen H. Knight, treasurer

Chicago Medical Missionary Association.—Permanent organization was perfected, May 23, with the following medical officers: Dr. William E Quine, president, Dr Isaac N Danforth, vice president, and Dr Elmore S Pettyjohn, secretary

Muscatine County (Iowa) Medical Society.—At the annual meeting held in Muscatine, May 7, Dr Henry M. Dean was elected president; Dr Calvin W. Smith, vice president, and Dr. Thomas F. Beveridge, secretary-treasurer, all of Muscatine

Monmouth County (N. J.) Medical Society.—At the annual meeting held in Freehold, May 11, Dr William T. MacMillan, Perrineville, was elected president; Dr D. McLean Forman, Freehold, secretary, and Dr Isaac S Long, Freehold, treasurer.

Fort Worth (Texas) Medical Association.—The following officers were elected at the annual meeting, May 26: President, Dr. Robert E L Miller, vice presidents, Drs J. R Frazier and W. Marion Davis; secretary, Dr Lyman A Barber, and treasurer, Dr. William R. Thompson

Appanoose-Wayne County (Iowa) Medical Society.—The third semi annual meeting was held at Moulton, May 19 Dr John L Shipley, Corydon, was elected president, Dr William L Dowling, Moulton, vice president, and Dr. Charles S James, Centerville, secretary and treasurer

Macon County (Mo.) Medical Society.—The twenty-fourth annual meeting was held in Macon May 7 Dr. William E Webb, Macon, was elected president; Dr George F. Brewington, Bevier, vice-president; Dr. George B. Rush, Macon, secretary, and Dr. Edward S Smith, Macon, treasurer

Salem County (N. J.) Medical Society.—The annual meeting was held in Salem, May 13, Dr. Henry T. Johnson, Pedricktown, was elected president; Dr. John F. Smith, Salem, vice-president; Dr. Henry Chavanne, Salem, secretary and treasurer, and Dr. William H. Carpenter Salem, reporter.

Middlesex County (Conn.) Medical Society.—The one hundred and eleventh annual meeting was held in Middletown, April 29. Dr. Charles H. Hubbard, Essex, was elected president; Dr. Charles E Stanley, Middletown, vice president; Dr. John E. Loveland, Middletown, clerk, and Dr Miner C. Hazen, Haddam, censor.

Linton District (Mo.) Medical Society—At the annual meeting held in Mexico, June 6, the following officers were elected: Dr. Ned R. Rodes, Mexico, president; Drs. Guy L. Noyes, Columbia, and Robert W. Berry, Mexico, vice-presidents; Dr. Edwin S Cave, Mexico, secretary, and Dr. Martin Yates, Fulton, treasurer.

Bristol South District (Mass) Medical Society.—At the annual meeting held in New Bedford, May 14, Dr. Joseph C. Pothier, New Bedford, was elected president; Dr. Dwight E. Cone, Fall River, vice president; Dr. Almson J. Abbe, secretary and treasurer, and Dr. Henry S. Swan, Middleboro, commissioner of trials.

Middlesex County (N. J.) Medical Society.—The annual meeting was held in New Brunswick, April 15. Dr. William E. Ramsey, Perth Amboy, was elected president; Dr. Frank M. Donohue, New Brunswick, vice president; Dr. David C. English, New Brunswick, treasurer, and Dr. William M. Moore, New Brunswick, secretary.

Franklin District (Mass.) Medical Association.—At the annual meeting held in Greenfield, May 12, Dr. Francis J. Canedy, Shelburne Falls, was elected president; Dr. Charles C. Messer, Turner's Falls, vice-president; Dr. Halbert G. Stetson, Greenfield, secretary and treasurer, and Dr. James D. Seymour, Whately, commissioner of trials.

Somerset County (N. J.) Medical Society.—At the annual meeting held in Somerville, April 30, Dr. Claudius R P. Fisher, Bound Brook, was elected president; Dr. John P. Hecht, Somerville, vice president; Dr J. H. Buchanan, North Plainfield, secretary; Dr Thomas H. Flynn, Somerville, treasurer, and Dr. William H. Long, Somerville, reporter.

Middlesex North District (Mass.) Medical Society.—At the annual meeting held in Lowell, April 29, Dr. Wyllis G. Eaton was elected president; Dr. Burnham R. Benner, vice-president; Dr. Return J. Meigs, secretary; Dr. Thomas B. Smith, treasurer; Dr David N. Patterson, librarian, and Dr. William B. Jackson, commissioner of trials, all of Lowell

Middlesex East District (Mass.) Medical Association—At the annual meeting, held in Wakefield, May 15, Dr. Mott A. Cummings, Winchester, was elected president: Dr. George N. P. Mead, Winchester, vice president; Dr. Harrison G Blake, Woburn, secretary; Dr. Charles Dutton, Wakefield, secretary, and Dr. Charles C. Odlin, Melrose, commissioner of trials.

Jackson County (Ark.) Medical Society.—At the annual meeting held in Newport, April 15, Dr. John M. Jones, Newport, was elected president; Dr Henry Owen, Newport, first vice-president; Dr. George K Stephens, Newport, second vice-president; Dr. H. O. Walker, secretary; Dr. Oscar E Jones, Newport, treasurer, and Dr. G A Causey, Grubbs, librarian.

Cape May County (N. J.) Medical Society.—On May 12 the annual meeting was held at Cape May. Dr. Joseph C Marshall, Tuckahoe, was elected president; Dr Nathan A. Cohen, Wildwood, vice-president; Dr. Daniel K. Webster, South Seaville, secretary and reporter, and Dr. Randolph Marshall, Tuckahoe, treasurer. Ocean City was selected as the next meeting place

Baltimore County (Md.) Medical Association.—The annual meeting was held at Towson, May 21. Dr. L Gibbons Smart, Baltimore, was elected president; Dr Benjamin R Benson, Cockeysville, vice-president; Dr Frank R. Rich, Towson, recording secretary; Dr. Richard C. Massenburg, Towson, corresponding secretary, and Dr. Harry S. Jarrett, Towson, treasurer.

Berkshire District (Mass.) Medical Society.—Pittsfield was the place selected for the annual meeting, April 30. Dr. Martin M. Brown, North Adams, was elected president; Dr. John J. Flynn, Pittsfield, vice-president; Dr. Lawrence C. Swift, Pittsfield, secretary; Dr. William Le R. Paddock, Pittsfield, treasurer, and Dr. Albert T. Wakefield, Sheffield, commissioner of trials

C, H. & D. Railway Surgeons' Association.—The second annual meeting was held in Dayton, May 19. The following officers were elected: President, Dr. William S. Hoy, Wellston, Ohio; vice-presidents, Drs. Millard F. Hussey, Sidney, Ohio, and Francis M. Fitton, Hamilton, Ohio; secretary, Dr. Mark Millikin, Hamilton, Ohio, and treasurer, Dr. J. Herman Thesing, Cincinnati.

Alabama Medical Congress.—At the annual meeting, April 9 and 10, in Montgomery, the following officers were elected: Dr. Willis E. Sterrs, Decatur, president; Drs. Samuel S. H. Washington, Montgomery, William L. Council, Birmingham, and H. J. Jenkins, Tuskogee, vice-presidents; Dr. H. Nesbitt, Montgomery, secretary, and Dr. George H. Wilkerson, Mobile, historian.

Scott County (Iowa) Medical Society.—The annual meeting was held in Davenport, June 2, when Dr. William L. Allen was elected president; Dr. Albert W. Elmer, vice-president; Dr. Charles H. Preston, secretary; Dr. Daniel J. McCarthy, treasurer; Dr. John H. Kulp, delegate for two years, and Dr. Heinrich Matthey, delegate for one year to the Iowa State Medical Society.

Essex South (Mass.) Medical Society.—The annual meeting was held at Salem, May 19, at which Dr. Frank S. Atwood, Salem, was elected president; Dr. Snow P. F. Cooke, Gloucester, vice-president; Dr. Harry E. Sears, Beverly, secretary; Dr. George Z. Goodell, Salem, treasurer; Dr. George K. Blair, Salem, librarian, and Dr. Justin Allen, Topsfield, commissioner of trials.

Camden County (N. J.) Medical Society.—The annual meeting was held, May 12, at Blackwood, when Dr. John W. Marcy, Merchantville, was elected president; Dr. Joseph H. Willis, Camden, vice-president; Dr. Paul M. Meeray, Camden, secretary; Dr. Joel W. Fithian, Camden, treasurer; Dr. Alfred Cramer, Camden, historian; Dr. Walter S. Bray, Camden, reporter, and Dr. John W. Donges, Camden, censor.

Hampshire District (Mass.) Medical Society.—At the annual meeting held in Northampton, May 14, Dr. Clarence R. Gardner, Northampton, was elected president; Dr. Albert G. Blodgett, Ware, vice-president; Dr. Arthur G. Minshall, Northampton, secretary; Dr. Alfred H. Hoadley, Northampton, treasurer; Dr. Edward W. Brown, Northampton, librarian, and Dr. Charles F. Branch, Amherst, commissioner of trials.

North Dakota State Medical Society.—The annual meeting was held in Bismarck, May 21 and 22, at which the following officers were elected: President, Dr. William H. Bodenstab, New Salem; vice-presidents, Drs. James A. Rankin, Jamestown, and Paul Sorkness, Fargo; secretary, Dr. Carl L. Brimi, Cooperstown, and treasurer, Dr. William H. M. Philip, Hope, Fargo was chosen as the next meeting place.

National Association of United States Pension Examining Surgeons.—The second annual meeting was held in Washington, D. C., May 13 and 14. The following officers were elected: Dr. William A. Howe, Phelps, N. Y., president; Drs. Philip Y. Eisenberg, Norristown, Pa., John Van Rensselaer, Washington, D. C., Parks Ritchie, St. Paul, Minn., and James Thompson, Kansas City, Mo., vice-presidents; Dr. Wheelock Rider, Rochester, N. Y., secretary, and Dr. Charles H. Glidden, Little Falls, N. Y., treasurer.

Fort Dodge District (Iowa) Medical Society.—At its annual meeting, May 12, this society decided to maintain its organization, despite the fact that a county medical society is about to be organized in Webster County in conformity with the organization plan of the Iowa State Medical Society and the American Medical Association. The following officers were elected: President, Dr. Hugh Mullarky, Manson; vice-president, Dr. Thomas F. Grayson, Fort Dodge; secretary, Dr. James D. Lowry, Fort Dodge, and treasurer, Dr. Harley G. Ristine, Fort Dodge.

Physicians' Mutual Aid Association of the Pacific Slope.—This association has incorporated at Los Angeles without capital stock for the purpose of mutual protection and relief to members, the widows, children, etc. The directors are Drs. David B. Van Slyck, Pasadena; George E. Abbott, Pasadena; Norman Bridge, Los Angeles; Solon Briggs, Pasadena; Edwin R. Chadbourne, Pasadena; W. Edward Hibbard; Charles L. King, Pasadena; Charles D. Lockwood, Pasadena; Fitch C. E. Mattison, Pasadena; James H. McBride, Pasadena, and Henry H. Sherk, Pasadena.

Marion County (Iowa) Medical Society.—At the annual meeting, held in Knoxville, May 14, a committee was appointed, consisting of Drs. A. A. Sandy, Harvey, Corwin W. Cornell, Knoxville, and G. Worstell, Knoxville, to revise the constitution and by-laws, in conformity with those of the state society and the American Medical Association. The following officers were elected: Dr. Lewis E. Park, Tracy, president; Drs. Mary D. Ardery, Knoxville, John V. Brann, Knoxville, and A. A. Sandy, Harvey, vice-presidents; Dr. Corwin W. Cornell, Knoxville, secretary; Dr. J. L. Miller, Pleasantville, assistant secretary, and Dr. John V. Brann, Knoxville, treasurer.

Ohio State Medical Association.—The fifty-eighth annual meeting was held in Dayton, June 3, 4 and 5. The following officers were elected: President, Dr. Charles S. Hamilton, Columbus; vice-presidents, Drs. William W. Pennell, Fredericktown, Thomas M. Wright, Troy, Benjamin R. McClellan, Xenia, and Horatio Chisholm, Marion; members of the house of delegates, American Medical Association, Drs. John S. Beck, Dayton, Charles A. L. Reed, Cincinnati, and P. Maxwell Foshay, Cleveland; alternates, Drs. Jacob F. Marchand, Canton, William J. Gillette, Toledo, and James F. Baldwin, Columbus. Cleveland was selected as the place of meeting in 1904.

CHICAGO SURGICAL SOCIETY.

Regular Meeting, held June 1, 1903.

The President, Dr. John B. Murphy, in the Chair.

The Treatment of the Complications Attendant on Chronic Gallstone Disease.

Dr. John B. Deaver, Philadelphia, read a paper on the above subject. In acute obstruction of the common duct, operation is not to be thought of until increasing jaundice or a period of chronicity, with fever and rapid pulse, indicates the need of such interference. Chronic gallstone obstruction, either with its increasing jaundice or the intermittent form, has called for surgical intervention, because of the liability of such stones to cause strictures, ulceration, fistulæ or damage to the pancreas and to aid in the production of suppuration of the liver ducts, when infection becomes superadded. As infection of a varying degree is practically always associated with the formation of gallstones, and as such infection is surely accompanied by a catarrhal condition of the mucous membrane of the common duct, the presence of a calculus, even if not sufficient in size to produce jaundice, will impair the drainage of the duct and induce a train of symptoms causing chronic invalidism.

The preparation for a gallstone operation differs in no wise from that for any other, except in the presence of jaundice, when calcium chlorid may be administered for three or four days previous to operation, in doses of 20 to 30 grains, three times a day. The use of a sand pillow is a useful adjunct.

The incision originated by Mayo Robson gives a perfectly satisfactory exposure of the field of operation, and by splitting the rectus muscle, instead of dividing it, will insure a much stronger abdominal wall.

The preparation of the field of operation calls for the expenditure of some time and attention to detail. He would no more think of cutting adhesions or searching for a stone without having protected the general peritoneal cavity than he would rupture a periappendiceal abscess in the absence of adequate gauze protection to the intestines. Adhesions should then be dealt with, and while in some cases a few ligatures and the use of the finger and scissors would be sufficient, in others the most extensive and careful dissections will be called for. Every band of adhesion should be carefully tied and divided, and in the separation of those of a more voluminous nature bleeding should be guarded against by the closest scrutiny.

A nice question may arise to be decided when a dilated and displaced stomach due to pericholecystic adhesions has caused marked gastrointestinal symptoms. The great advances and the brilliant results of a gastroenterostomy may well cause an operator to pause and consider whether he can successfully break up all constricting bands and prevent their recurrence, whereas a gastroenterostomy in addition may cause complete relief of the symptoms. Personally, he believes one should be governed by the circumstances of each case; the risk of opening the stomach and intestine is not absolutely *nil*, and the necessity of avoiding peristalsis for some hours after operation would perhaps cause extensive readherence of all raw surfaces.

Fistulæ require great caution in their management, in order to avoid soiling the peritoneum with bowel contents by inadvertently opening the intestine when cutting a supposed adhesion. These cases call for the expert use of the needle and thread, and require the operator to be the master of all situations and emergencies.

The question of drainage occupies a prominent place in the technic of all gall bladder operations. The operator never has any doubt as to the wisdom of draining the suppurative forms of cholecystitis and cholangitis. With a gallstone partially obstructing the common duct, and a shrunken, thickened gall bladder, the most rational operation at first would seem to consist in removing the stone, closing the duct, and excising the gall bladder. In addition to the tubular drainage, in such cases he places two strips of gauze, one leading to the stump of the gall bladder, the other slightly spread beneath the wound in the common duct. It is safer to drain the hepatic duct at all times, not only on account of infection, but owing to the likelihood of overlooking stones in the hepatic ducts. Kehr even goes so far as to state that after choledochotomy with suture, "even the most skilled surgeon must count upon overlooking stones in from 10 to 15 per cent. of his cases." The speaker uses a smaller sized tube than the latter author when draining.

The question, when is the time of election for performing a surgical operation on patients suffering with cholelithiasis, has been answered time and again by surgeons. Mayo Robson believes that "as soon as gallstones give serious trouble their removal by operation is the most rational method of treatment, since it is only from the complications, which in many cases of cholelithiasis arise sooner or later, that any danger after operation may be apprehended." It is the opinion of Dr. Deaver, after a rich experience in complicated and uncomplicated cases, that operation should be resorted to as soon as it is definitely known that gallstones are present. The recent statistics published by Kehr speak eloquently for the results of early operation. In 535 uncomplicated laparotomies for gallstones the mortality was 3.5 per cent. In 71 simultaneous operations in inoperable carcinoma of the gall bladder, common duct or liver, in diffused suppurative cholangitis, diffused suppurated peritonitis and sepsis, the mortality was 97 per cent; nearly every case, 69 out of 71, succumbed to the deadly spread of infection or to carcinoma possibly the result of chronic gallstone irritation. In 114 operations on the stomach, intestines, pancreas, liver, kidney, etc., 24 per cent. died. These cases were those in which extensive adhesions, chronic pancreatitis, or various changes in the liver and kidney made the operation difficult and the anesthesia prolonged. Gallstones, *per se*, never kill, and fatal infectious cholangitis is not common in the absence of a stone in the ducts. It is only in the presence of great adhesions, fistulæ, suppuration, pancreatitis, or disease of the liver and kidneys that the mortality rises in direct proportion to the grade of the complication. Operation is particularly indicated in those cases of chronic calculous cholecystitis, without jaundice, and with or without enlargement of the gall bladder. Like the interval operation in appendicitis, with a chronic low grade inflammation, perhaps a fecal concretion, and with more or less adhesions, the removal of the diseased gall bladder can be performed with as much celerity and safety as can the amputation of such an appendix. Unoperated, they give rise to a train of symptoms driving the unfortunate patient to the stomach specialist, or to places like Carlsbad. The stones are too large to pass the cystic duct, and the low grade inflammation is responsible for a sequel of symptoms which lead to chronic invalidism.

DISCUSSION.

Dr. William J. Mayo, Rochester, Minn., said there are two important questions in connection with surgery of the gall bladder and biliary passages which are as yet unsettled. First, in what cases shall we remove the gall bladder? Second, in what cases is it wise to drain the bile to the surface? The majority of the complications of gallstone disease are the result of delay, and preceding this time, there are diagnostic symptoms which would have enabled an operation to have been performed with much less danger. Should we, in the early uncomplicated cases of gallstone disease, take the gall bladder out, or is it sufficient to drain it for a time, until the biliary discharge is sterile? Without going extensively into the physiology of the gall bladder, there is no doubt but that Murphy is right in believing that one of its functions is to act as a tension bulb, keeping the flow of bile steady instead of intermittent. This is unimportant of itself; but when the gall bladder is suddenly cut off by a stone impacted in the cystic duct, there are not only symptoms arising from the retention in the cystic cavity, but there is usually some irritation of the liver from the increased tension and mild infection, shown in many cases by transient slight jaundice, etc. The liver soon accommodates itself to this change, and when the acute symptoms of obstruction are over, such a gall bladder can be tied off without liver drainage, but if the cystic duct is not obstructed and the gall bladder still persists in the biliary circulation in spite of the stones the sudden tying-off of the cystic duct, without provision for the escape of bile, is liable to increase liver tension and coincidentally the infection of the liver ducts, and adds this condition to the usual risks of operation. It is altogether probable that in the majority of cases this would do harm, yet in the exceptional ones cessation of liver function and death may follow. As stones do not re-form after complete removal and drainage, it woud seem to the speaker that the excision of the otherwise healthy gall bladder, on account of gallstones, subjects the patient to some unnecessary risks, unless some provision is made for hepatic drainage. The thick, contracted gall bladder, with obstruction at the cystic duct, has lost its function, and such a gall bladder is the one in which we are liable to have future trouble from mucous fistula, adhesions, cancer, etc. Fortunately, by reason of the obstruction, the liver has become accustomed to the change in the extension, and such a gall bladder can be removed without biliary drainage. He has never seen harm follow the ligation of the cystic duct in such cases, and this exists in about one-third of the cases as they come to the operating table. Stones in the common duct are the cause of cholangitis, and drainage of bile to the surface is necessary either by a cholecystostomy, if the cystic duct is sufficiently patulous for the purpose, or by leaving the incision in the common duct open, the latter being the safer method.

To what extent is it necessary to provide bile drainage in cases in which there are no stones in the common duct? Cholecystostomy drains the hepatic ducts by the escape of bile to the surface, and all of experience have seen a patient doing badly, suddenly relieved by a discharge of bile in a previously dry wound. So true is this that often with a patient not doing well the drains are loosened, hoping to establish bile drainage and, if one succeeds, recovery usually follows. He has tried to classify his cases with regard to the necessity of hepatic drainage. The following is about the position he has temporarily assumed as a result of this study:

1. If the gall bladder contains bile and the organ is distensible, if the gall bladder be removed, bile drainage is provided for by cutting the cystic duct across and leaving it open. If such a patient is very obese, or has degenerative lesions of other organs, he prefers cholecystostomy.

2. If there are symptoms of a cholangitis, even of mild grade, he provides for a bile drainage, and if the condition is acute, the drainage must be free.

3. If the gall bladder contains cystic fluid, but no bile, and the patient has symptoms of cholangitis, he removes the organ and cuts the cystic duct below the obstruction, to permit of bile discharge. If necessary, the cystic duct is split down to the common duct.

4. In a few cases he has directly opened the common duct, for the purpose of securing liver drainage, but it is very rare that this is necessary, unless there are or have been stones in the common duct and it is dilated. The cystic duct ordinarily can be advantageously used for the purpose, although in a few instances he has found it necessary to cut it off flush with the common duct, leaving a lateral defect in its wall for drainage purposes. This brings up the question as to how much danger of peritonitis there is as a result of bile leakage into the peritoneal cavity. If there is free gauze drainage with or without tubage, there is but little danger of peritoneal infection from the bile. He has never seen a case of death from this cause; but the drainage should be attached to the proper point by a catgut suture to prevent its floating away by the bile discharge or displacement by the action of the diaphragm on the liver. If the common duct is greatly dilated and after removal of the calculi there is considerable detritus, the end of a rubber drainage tube is inserted just into the duct opening and secured by a catgut suture. If this condition does not exist, tubage of the common duct is unnecessary.

To sum up: Cholecystectomy is to be preferred if the patient is otherwise in good condition. If the cystic duct is obstructed and the gall bladder contains only cystic fluid, ligation of the cystic duct, without provision for hepatic drainage, is safe. If there be any infection of the hepatic ducts, bile drainage is essential.

Gallstones and Gall Bladder Diseases from the Standpoint of the Physician.

Dr. Norman Bridge read a paper on this subject. He stated that the physician can often present the urgency of an operation to the patient better than the surgeon. Most people dread operation and many suspect the surgeons of having undue enjoyment in the act of operating and of being biased by visions of large fees. The physician is, for these reasons, a more acceptable counselor, but even he, in these later days, says the essayist, is not free from the suspicion of seeking a part of the surgeon's reward.

The author cited cases to illustrate the long continuance of gall-bladder symptoms without recognition.

Whether operation should be done in all cases of proven gallstones, or of suppuration or distension of the gall bladder, is the same question over again of the misfortunes of the appendix. Cases become quiescent, or recover and remain so for years, even with gallstones, the patients dying of other diseases or of old age. Hence one camp of physicians contends that in all such cases we should wait; not operate until forced to it by some urgent symptoms or situations. The other camp says that, for the sake of safety, operation should always be done promptly, since the next attack might be fatal. Both are in part right; neither can prove the other wholly wrong.

People are taking great personal risks in manifold ways all their lives, and with the lightest thought. But if one suffering from cholelithiasis, to the extent of producing marked symptoms, would minimize to the lowest point his danger of death from it, he will probably have it dealt with surgically, always provided he has a surgeon who is wise in pathology and procedure, as well as expert in technic, and provided the patient has good vital organs. That statement is still true of the diseased appendix; it is true of gallstones and gall bladder infection as well.

All cases of chronic cholelithiasis, where the suffering has led to the opium habit, should be operated on. Every case of known distension of the gall bladder by fluid of any sort is in constant peril, and should be operated, if possible. If there is reason to believe the bladder contains pus, operation is urgently demanded. And in all cases where frequent recurrences, or the persistence of symptoms indicate the progressive contraction and fibrosis of the gall bladder, operation should be insisted on, for in these there is constant danger of an explosion of infection that may destroy life.

All cases of proven gallstones or gall bladder trouble are proper subjects for surgical consultation, whether they are to be regarded as surgical cases or ever come to operation. Whether operation is to be done or not when conditions do not sound the insistent need of an operation, or the patient declines, or the physician sees reasons against an operation, proper medical treatment should be instituted always, and persistently carried out. This is as true of the gallstone troubles as it is of those of the appendix.

What are such measures? In the acute cases, there should be absolute rest of the body. Rest of the stomach and bowels to the extent of starvation for some days is best, especially where peritonitis is present or threatened. Nutrient enemas may be allowed tentatively, but never nutrition by the stomach in such cases. The upper abdominal organs must be kept still, not be shaken about by peristaltic movements.

In the subacute and chronic cases the daily full flushing of the bowels by alkaline laxative waters is useful, but it is irrational to suppose that gallstones are thus washed away. Nor do olive oil or any other of the pretended expulsive agents have the smallest effect. The thing that happens is probable merely the elimination of effete matter, thus increasing the physiologic resisting power. This process is aided by a restricted diet of the most assimilable foods, and by general good hygiene.

DISCUSSION.

Dr. Frank Billings, speaking from the standpoint of the internist, said that given a reasonable certainty of the presence of gallstones in the gall bladder or ducts, it calls for their removal by means of the surgeon's knife, with the statement modified to this effect, namely, that where there exists some disease of other organs of the body, as the kidneys, or the heart, which would render the use of an anesthetic immediately dangerous to the health of the individual, it was questionable whether operation should be done. If gallstones are acute in their manifestations, his advice is to wait until the symptoms have diminished or subsided. If attended with jaundice, to wait a reasonable time to see if it does not diminish, and if it does not diminish, to attempt to improve the coagulability of the blood by the use of calcium chlorid. In recent years, by means of calcium chlorid, the coagulability of the blood has been increased or improved to such an extent as to make a surgical operation less dangerous than before it was given. He would go further than Kehr, if he understood him correctly, and say that if there are symptoms of gallstones in the common duct, and they subsided, and if following that, within a reasonable length of time, there are further symptoms or indications of gallstones he would urge operation. He understood from the paper read by Kehr at Washington that he (Kehr) would not operate on such cases. While the speaker made this statement from a medical point of view, of operating on gallstone cases when the evidence was clear that they were present, surgeons should not forget that they owe a great deal of what they know to-day to Pasteur and Koch. It is the work of Pasteur, Koch, Lister and others that has enabled surgeons to open the abdomen in these cases, and to treat them successfully.

Dr. Billings then recounted briefly the symptoms of cholelithiasis and pointed out their peculiarity.

He said the medical treatment of gallstones was instituted long before surgeons opened the abdomen for the relief of this condition. The Carlsbad treatment has been in vogue for years, and surgeons should not censure medical men too much for sending their patients to Carlsbad or resorting to medical treatment, when it was known that a celebrated surgeon who, two years after operating on his own father for gallstones, was attacked himself, but instead of undergoing an operation, he went to Carlsbad for treatment.

Dr. Arthur Dean Bevan said that in a discussion as broad as the one on the subject of cholelithiasis, he took it that brief conclusions arrived at from a review of one's own experience would be in order, and with such an idea in view he submitted the following:

1. Gallstone disease is due to a mycotic invasion of the bile tracts. Gallstone disease is exceedingly common. From my dissecting-room experience, it occurs in 16 per cent. of such cadavers.

2. In the vast majority of cases of gallstone disease, the patient does not suffer from the existence of the condition.

3. A close parallel can not be drawn between cholelithiasis and appendicitis, and the conclusions which we have all arrived at in appendicitis, i. e., that a diseased appendix should in practically all cases be operated on, can not with equal force be applied to cholelithiasis: (a) Because the disease, in its first manifestations, does not carry with it nearly the amount of danger to the patient as does appendicitis. (b) Because of the enormous number of individuals who have gallstones many have slight, single or very infrequent manifestations of the disease which are speedily recovered from, carry little danger, and a good prospect of permanent recovery. Several of my colleagues have had single attacks, and have been advised by both surgeons and internists to await developments and postpone operative interference until the indications warranted it.

4. As a corollary to the above, the hygienic treatment, i. e., exercise, diet, salines, is indicated in cholelithiasis, as a rule, in the first manifestations of the disease.

5. Surgical treatment is indicated when the manifestations of the disease are repeated, and especially when they are frequent and severe. Surgical treatment is demanded when we have:

(a) An infected gall bladder; (b) with stone or obstruction of the cystic duct; (c) with stone or obstruction of common duct.

6. With stones still confined to the gall bladder, cholecystotomy with drainage is the operation of choice.

7. With stone in the cystic duct, or obstruction of cystic duct, cholecystectomy is the operation of choice.

8. With stone in the common duct, choledochotomy with drainage is the operation of choice.

9. With stone in both cystic and common ducts, cholecystectomy and removal of stone from common duct, and drainage of common duct, is the operation of choice.

10. With obstruction of common duct from chronic interstitial pancreatitis or carcinoma, drainage of the bile tracts through the gall bladder is the operation of choice.

11. In the cases of cholecystitis and cholangitis simulating gallstones, drainage of the gall bladder should be carried out, and with this probably the use of salicylate of sodium, which is excreted through the bile, and has seemed to exert a definite local antiseptic effect.

12. To expose the bile tracts, the incision which I introduced in 1898, as modified by Weir and Mayo Robson, gives the best access to the region, makes the operation in difficult cases much easier, saves valuable time, and is least likely to be followed by hernia.

13. The mortality from gallstone operations is surprisingly small in uncomplicated cases. I have had no deaths in more than one hundred cholecystotomies, and in more than twenty cholecystectomies have had but one death in fourteen cases of obstruction of the common duct.

14. The prospects of permanent cure after operative removal of gallstones are very good. The recurrences of symptoms are almost always due to incomplete operations, i. e., leaving some stones or the doing of a cholecystotomy where a cholecystectomy should have been done.

15. Personally, I have seen little evidence pointing to gallstones as a factor in the production of carcinoma, and therefore incline to the belief that carcinoma favors gallstone formation, and is the cause and not the effect where these two conditions coexist.

16. The modern surgical treatment of cholelithiasis is, with the exception of the surgical treatment of appendicitis, the most valuable addition that has been made to medicine during the last twenty years. Inasmuch as the general practitioner sees most of these cases in their early history, it rests with him whether or not this valuable knowledge will be made the most of and accomplish the greatest amount of good.

DR. DEAVER said that the points brought out by Dr. Mayo relative to the non-removal of the gall bladder in certain cases were very apropos. In the past he had made the mistake of tying off the cystic duct and removing the gall bladder when he should have done a cholecystotomy. However, Nature had come to the rescue, had forced the ligature off, established a biliary fistula, and had saved the patient's life.

The remarks of Dr. Bevan were in harmony with the position taken by most surgeons with regard to the treatment of cases of cholelithiasis.

A short time ago, in an address delivered in this city, the speaker said the surgeons of the east had to bow to the surgeons of the west, and after hearing the remarks of Dr. Billings, he was prompted to say that the medical men of the east would now have to bow to the medical men of the west. If the medical men of the east took the advanced position enunciated by Dr. Billings in regard to operative intervention cases of gallstones, it would not cause surgeons to have so many gray hairs, to spend so many restless nights, and make them prematurely old.

MICHIGAN STATE MEDICAL SOCIETY.

Annual Meeting, held at Detroit, June 11 and 12, 1903.

The President, Dr. A. E. Bulson, Jackson, in the Chair.

This meeting was undoubtedly the most successful in the history of the society; being the first since the reorganization, it was one of the most important. During the eleven months since the last annual meeting the state has been thoroughly organized; the 58 chartered branches representing 78 of the 83 counties, with membership fully paid up of 1,712, being the result of the year's work of the council and the officers of the state and county societies.

Business Proceedings.

The council, presided over by Dr. Leartus Connor, Detroit, met the day preceding the meeting, carefully reviewed the enormous amount of work done during the year, received the report of its officers and committees and prepared its report to the house of delegates. It met again the following day. The council had been composed of members appointed at the last annual meeting to serve until their successors could be elected by the house of delegates, which was to meet for the first time this year. The house fully appreciated the work done by the members and returned to the council eight of the former members for a period of two to six years. Two of the members had declined to serve longer. The new council met the last day, elected Dr. Leartus Connor, Detroit, chairman, and Dr. W. H. Haughey, Battle Creek, secretary, and outlined the work for the coming year.

The house of delegates met the evening preceding the meeting, with almost every delegate present. The house was called to order by the president of the society, who briefly defined to the members their duties and responsibilities. The report of the council and of the various committees was received. The house appointed a business committee, to which all new business was referred without debate, a committee on finance to act on the legitimate expenses of the councilor incurred in his work, and a committee on nomination.

Two other meetings of the house were held, and all its business was transacted promptly under the new constitution and by-laws, but one minor change in the by-laws having been made.

The first general meeting of the society was held at 10 o'clock on the first day. At this the address of the president, Dr. A. E. Bulson, Jackson, was delivered, in which he discussed the work of the organization of the profession of Michigan, and emphatically emphasized that the work of the future lies in the county society.

Social Functions.

At the evening of the first day the members and ladies were given a reception by the Wayne County Medical Society, which was largely attended, 700 being present. After the reception a vaudeville entertainment was presented by all the best talent then performing at the vaudeville theaters of the city. This was thoroughly enjoyed.

At the meetings of the three sections papers of importance were delivered and discussed. The general meetings and the sections were well attended; 555 members registered, which attendance more than doubles any other meeting in the history of the society. All meetings were held in the large Masonic Temple. Everything worked harmoniously; business was promptly dispatched and there was not a discordant note; the new order of things was accepted as the natural course of events.

The New Officers.

Grand Rapids was chosen as the next place of meeting, June, 1904, and the duration of the session was extended to three days.

The following officers were elected: President, Dr. James F. Breakey, Ann Arbor; vice-presidents, Drs. George C. Hafford, Albion, Wyllis S. Walkley, Grand Haven, and Charles S. Cope, Ionia; members of council for six years—Drs. William H. Haughey, Battle Creek, C. B. Burr, Flint, and William T. Dodge, Big Rapids; for four years—Drs. Albert E. Bulson, Jackson, Sidney I. Small, Saginaw, Bartlett H. McMullen, Cadillac, and Theodore A. Felch, Ishpeming; for two years—Drs. George D. Carnes, South Haven, D. Emmett Welsh, Grand Rapids, Henry B. Landon, Bay City, and Mortimer Wilson, Port Huron; members House of Delegates American Medical Association, Dr. Henry O. Walker, Detroit, for two years, and Drs. William K. West, Calumet, and Charles B. Stockwell, Port Huron, for one year.

WISCONSIN STATE MEDICAL SOCIETY.

Fifty-seventh Annual Meeting, held in Milwaukee, June 3-5, 1903.

The President, Dr. J. V. R. Lyman, in the Chair.

Proposal for Reorganization.

The attendance was large. The important matter of the morning session was presentation of the report of the committee on reorganization, by Dr. J. F. Pritchard.

The committee, he said, had but little to add to its preliminary report heretofore presented. The plan furnished by the American Medical Association was adopted by the committee. By adoption of the proposed constitution and by-laws, all the machinery of the new plan will be ready for the 1904 session.

Hemorrhage Into the Cranial Cavity Following Injury to the Skull.

DR. CHARLES H. LEMON, Milwaukee, read this paper and made the argument, not that all cases of brain contusion and laceration should be operated on, but as the expectant method frequently results in death, when the signs of cerebral compression manifest themselves and the life of the patient is thereby imperiled, it becomes the duty of the surgeon to select some plan for relieving this undue tension.

DISCUSSION.

DR. A. J. BURGESS, Milwaukee, called attention to the fact that it is the cases in which there is no apparent fracture or laceration which are neglected, but which can frequently be saved, by relieving intracranial pressure.

DR. W. H. EARLES said that where there was any pronounced suspicion of intracranial pressure it is the duty of the surgeon to relieve it by operative procedure, for it is as safe to enter the brain cavity to-day as it is to enter the abdominal cavity.

DR. A. H. LEVINGS mentioned cases of rupture of the branch of the middle cerebral artery from injury, which is denied by some; also that fatal head injuries are not always due to hemorrhage; and that contusion or laceration of the brain itself can never be put under control by operative means. Progressive edema is rare.

DR. F. SHIMONEK, Milwaukee, called attention to the danger of septic infection of the meninges from injections into the ear in cases of fracture of the middle fossa of the skull where communication is made with the canal of the ear.

Retrodisplacement of the Uterus.

DR. G. A. KLETZSCH, Milwaukee, read a paper on this subject, covering the field of prophylaxis.

DISCUSSION.

DR. A. J. PULS said that many cases of retroversion and lateral displacement could be cured by local treatment, but where inflammatory conditions have set in and the uterus becomes flexed by the local peritonitis, operation is necessary.

DR. F. SHIMONEK drew distinction between retroflexion and retroversion. The latter cases are usually not the result of infection, but of mechanical forces causing sudden displacement. Retroflexion indicates pathology of the organ itself.

DR. BURGESS condemned local treatment by intrauterine applications of various kinds, and spoke of the necessity of fresh air and exercise.

DR. WILLIAM E. FAIRFIELD, Green Bay, said that retroversion was frequently caused in puerperæ by their lying on the back, being bandaged and taking anodynes, which caused constipation after labor; lack of proper drainage causing infection, subinvolution and retroversion.

The president then presented his address, giving a history of the society and recounting the advantages of the proposed reorganization.

Blood Examinations.

DR. L. HEKTOEN, Chicago, presented a paper on the scientific and practical value of bacteriologic examinations of the blood during life, emphasizing its diagnostic value in septic disease, especially in the early stages of typhoidal diseases and showing that henceforth the physician's work will require more and more the constant and intelligent use of the facilities of a well-equipped laboratory.

DR. J. B. HERRICK, Chicago, said: 1. Bacteriologic examination of the blood should become general in view of the probability that there will come a specific therapy for infectious diseases, and practitioners should be ready and know how to apply the specific when it is offered.

2. Such examination must be careful and thorough, so that we may better understand the clinical course of these diseases.

3. This examination enables us to make definite etiologic diagnoses.

4. This method is feasible, the technic is simple, and it has come to stay.

5. The system of co-operation would enable a rural laboratory to be maintained in small towns. The laboratory work, of course, must be controlled and interpreted by clinical observation. The day of the general practitioner is not passing away because of laboratories.

Diagnosis of Hysteria.

DR. HUGH T. PATRICK, Chicago, said it is important to diagnose hysterical anesthesia by careful examination. There are three striking characteristics of this functional condition: 1, distribution; 2, sharp limitation or border; and 3, rapid shifting of this limitation.

The area of anesthesia of organic origin, on the other hand, does not shift, but shades gradually to sensation. The anesthesia of the hysterical patient being a functional or psychic difficulty, the patient is utterly unable to remember the location of the area of anesthesia. The same principle of shifting applies to hysterical hyperesthesia.

Reorganization Adopted.

The subject of reorganization was then taken up, and Dr. George H. Simmons, Secretary of the American Medical Association, addressed the society. He explained the advantages of uniformity of organization on the county plan, and said that the American Medical Association was asking the state societies to form one compact organization and to federate with the American Medical Association in a strong union which could accomplish important results in increasing membership, lessening expense, securing necessary legislation, and in the general advancement of the profession.

The constitution and by-laws were adopted as printed, except that the name of the State Medical Society of Wisconsin was retained in place of the one proposed by the committee, the new constitution and by-laws to go into effect at the close of the present annual session.

A committee of ten with the powers of the council under the new constitution, was appointed to act as an organization for the ensuing year, the president, secretary and treasurer to be members of the committee ex officio, in addition to the ten. The committee consisted of Drs. J. S. Pritchard, J. S. Walbridge, G. A. Kletzsch, Herman Reineking, W. T. Sarles, T. J. Redelings, J. M. Dodd, Dr. E. L. Boothby, C. S. Smith and J. G. Meachem.

Management of the Mother During the Childbed Period.

DR. A. D. GIBSON of Park Falls read a paper Thursday. He said that the toilet of the woman should immediately follow the delivery of the placenta; but the postpartum douche and abdominal binder ought not to be used. The babe may be given the breast in a few hours after birth. The bowels of the mother should be evacuated usually within twenty-four hours after the birth. As to position in bed, let the patient follow her own inclinations. The woman should remain in bed as long as the lochia is of a bright red color.

DISCUSSION.

DR. G. E. BALDWIN, Dartford, said that the secret of the comfort during this period is cleanliness. Breasts and nipples can not be cleansed too often, thus avoiding fissures.

The Physician's Failures.

DR. A. F. FUCHS, Loyal, then read a paper on shortcomings of the physician, particularly in his relation to the state and hygiene. He deplored the fact that nearly all of our scholarship and learning come from Germany. We should make American medicine. We are troubled here by too much graft, while there is no graft in German institutions.

DISCUSSION.

Dr. Ralph Elmergreen, Milwaukee, urged the physician to live up to his duties as a citizen and take a more active interest in politics.

Dr. Arthur R. Edwards, Chicago, presented the annual address in medicine on the "Diagnosis and Treatment of Nephritis."

Dr. H. B. Sears, Beaver Dam, read a paper on "Indigestion, a Few of Its Causes and a Few of Its Effects."

Semilunar Cartilages, Their Anatomy and Surgery.

Dr. H. A. Sifton, Milwaukee, read a paper describing the proper treatment of injuries or displacement of the semilunar cartilages, including reduction, and where indicated, operation. These cartilages can be removed without damaging the function of the joint.

DISCUSSION.

Dr. A. H. Levings, Milwaukee, said this condition must be differentiated from sprain. In sprain you never get the snap, the locking of the joint, protuberance, node or vacant place at the site of the cartilage. Differentiation must also be made from loose or floating cartilages.

The Sequelae of Adenoids.

Dr. C. D. Conkey, West Superior, read a paper to point out the frequency of imperfect respiration, the vast number of people who breathe imperfectly, and the serious results that follow.

DISCUSSION.

Dr. H. B. Hitz, Milwaukee, said that early recognition and removal of adenoids is important. Recurrence is rare if the adenoids are properly removed, which should usually be done under an anesthetic.

Immunity and Its Relation to Surgical Pathology.

Dr. J. M. Dodd, Ashland, in this paper, said that a clear understanding of the principles of immunity will point the way to successful diagnosis and treatment of all diseased conditions, but the problem, of course, has not been solved. We look to physiologic chemistry to furnish a solution ultimately, but at present we can not always foretell the result of our procedures, because the estimation of vital resistance is not yet possible.

Eye Injuries.

Dr. J. A. Bach, Milwaukee, presented a paper on the "Significance of Perforating Wounds of the Eyeball." He said that if properly made by the surgeon such wounds should not be dangerous. Accidental wounds of the eyeball are dangerous, but all possible sources of ciliary irritation ought to be speedily removed so as to lessen the stimulus to the production of plastic exudate.

Prostatectomy.

Dr. T. W. Nuzum, Broadhead, claimed that prostatectomy is an operation designed to add many years of comfort to many patients; the danger lies in sclerosed arteries and hemorrhages; the mortality is small and will be further reduced with improved technic.

DISCUSSION.

Dr. D. J. Hayes, Milwaukee, said these cases usually come too late. An early prostatectomy is more successful than a late one, but it is very difficult to get the early cases. The Bottini operation is not desirable.

Dr. Wilhelm F. Becker, Milwaukee, read a paper on "Postmortem Degeneration of the Pancreas."

Albuminuria in the Apparently Healthy.

Dr. W. H. Washburn, Milwaukee, read a paper showing the results of the examination of 258 cases, extending from 1886 to 1903. The results of treatment have been most discouraging. A considerable proportion of the cases recover, but this is due to the *vis medicatrix naturæ*. The prognosis is less unfavorable than has generally been entertained during the past ten years.

DISCUSSION.

Dr. C. E. Albright said that an examination of 225 cases convinced him that the albumin in no single case occurred under strictly normal conditions.

Dr. William J. Mayo, Rochester, Minn., then read the annual address on "Surgery of the Stomach."

Russian Massacre of Jews Condemned.

The society passed a resolution condemning the late massacres of Jews in Russia as a heinous crime, unparalleled in the history of civilization.

Ethyl Chlorid as a General Anesthetic.

Dr. F. Pfister, Milwaukee, said this is safer than either ether or chloroform and never causes vomiting or headache. Its use is preferable in minor surgery and in younger subjects. Excitement and cyanosis are absent.

Dr. G. E. Seaman, Milwaukee, read a paper on "Diagnosis and Treatment of Some of the Inflammatory Conditions of the Middle Ear."

Infant Feeding.

Dr. Bertha E. Thompson, Oshkosh, said that in Germany the records show 8 per cent. deaths among breast-fed children, as against 51 per cent. among artificially-fed children. Excess of proteids in milk gives more trouble than anything else. Clean, raw milk is better than sterilized or Pasteurized milk.

DISCUSSION.

Dr. J. R. Barnett, Neenah, said that condensed milk is a good substitute for mother's milk.

Dr. L. Boorse, Milwaukee, said that even trained nurses are ignorant of the proper method of caring for the new born. "Inanition fever," so-called, must be guarded against. Regular habits of nursing and regular periods for feeding are very important when substitute foods are used.

Medical Journal Affiliation.

The society passed a resolution making a contract with the *Wisconsin Medical Journal* to publish the transactions and furnish a copy of the journal monthly to each member at a price not to exceed $1 a year each. The secretary of the society is made editor of the journal, and is to have control over the matters published pertaining to the business of the state society.

Deflections of the Septum.

Dr. F. T. Nye read a paper on "Septal Deflections, Their Consequence and Treatment." The consequences are: 1. Imperfect respiratory functions resulting in auditory or olfactory disturbances. 2. Pharyngeal and laryngeal diseases. 3. Imperfect drainage into the nasal passage. The otitic complications are most to be dreaded. The principles to be applied for relief are surgical, involving depressions of the floor, removal of excess cartilaginous or bony tissue to replace septum in its normal position and to facilitate its maintenance in that position.

DISCUSSION.

Dr. Seaman did not believe that congenital maldevelopment is responsible for the largest number of cases of septal deflection. The nose should not be operated on so long as it is unobstructed. In operating, straighten the septum in the simplest possible manner. Specially devised instruments are not necessary. Cleanliness should be thorough, for infection frequently follows. Local anestheia is preferable, where possible.

Obstetric Technic.

Dr. E. F. Fish, Milwaukee, read a paper on obstetrics. He said do not give douches unless there is some decided indication, such as gonorrhea. Rubber gloves are useful. If the patient is well prepared, and the physician also, any number of examinations will not harm the patient. Obstetric forceps are a necessity in selected cases. Repair lacerations at once. Sepsis occurs in spite of our best efforts. Antistreptococcus serum treatment does not seem to have a large following. Hysterectomy is not advisable because it is so difficult to select proper cases. Formaldehyd apparently has no specific action in the treatment of puerperal sepsis.

DISCUSSION.

Dr. J. T. Scollard, Milwaukee, argued strongly against meddlesome interference on the part of incompetent midwives and against too frequent internal examinations and too early and unnecessary operative interference on the part of physicians.

Dr. W. B. Hill, Milwaukee, said he did not object to digital examinations as a means of determining the exact condition of affairs. Among patients who live in bad surroundings there appears to be an acquired immunity to infection. Antistreptococcus serum is effective in cases of toxemia from the streptococcus.

The Protective Functions of Organs.

Dr. R. C. Brown, Milwaukee, read a paper on this subject. The efforts of the physician should not be directed so much to the combating of symptoms as to the assisting of Nature in her protective efforts.

Myomectomy of Uterine Fibroids.

Dr. A. J. Puls, Milwaukee, said that it should be our aim to preserve the healthy tissues and remove only the degenerated or disintegrated parts. Myomectomy may, therefore, be substituted for the extirpation of the uterus wherever sufficient healthy uterine tissue can be safely left.

Surgical Progress.

Dr. W. B. Earles, Milwaukee, read this paper. Progress has been made in almost every branch of surgery. It has been shown that many gastric ulcers are amenable to operative procedure. Excision of the gall bladder is often better than mere drainage. The hopes inspired by reports of *x*-ray treatment of carcinoma are being dispelled by clinical statistics. The special orthopedic work of Dr. Lorenz is followed by functional improvement at least.

Infantile Rheumatism.

Dr. Arthur P. Holbrook, Milwaukee, read a paper on "Manifestations of Rheumatism in Infancy and Early Childhood."

DISCUSSION.

Dr. Boorse said the etiologic factor of this disease has not yet been accurately determined. Early diagnosis and treatment are important. Endocarditis is a frequent complication. Salicylates have a specific as well as an anodyne effect.

Dr. H. B. Sears, Beaver Dam, said that nutritional defects should be especially considered. Withholding starches and sugars is not an important factor.

Dr. S. S. Hall said that we know little more about the etiology of the disease than in the past, but we have improved in our treatment.

Dr. C. S. Sheldon, Madison, advised the use of aspirin.

Dr. G. J. Kaumheimer, Milwaukee, thought the lack of effect in the use of salicylates was because too small doses were used.

Dr. Holbrook said there are two treatments of rheumatism: One is to grin and bear it, and the other is to bear it without grinning.

Diabetes Mellitus.

Dr. W. H. Neilson said that in this disease there is interference with the consumption of sugar; this is due to the absence in the blood of the glycolytic enzyme. Evidence is accumulating in favor of the islands of Langerhans as the producers of this enzyme, and that their invasion and destruction is the constant pathologic entity. The treatment is that which will best improve nutrition and not tax the carbohydrate consuming powers.

Dr. J. C. Cutler, Verona, read a paper on "A Case of Dwarf Pelvis with Cesarean Section."

Milwaukee was chosen as the next place of meeting.

Election of Officers.

The following officers were elected: Dr. F. E. Walbridge, president; Drs. James Mills, Janesville, and C. C. Gratiot, Shullsburg, vice-presidents; Dr. Charles S. Sheldon, Madison, secretary; Dr. Sidney S. Hall, Ripon, treasurer; Dr. Edward E. Evans, La Crosse, delegate to American Medical Association.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 21, 1903.

The Vice-President, Dr. Charles L. Dana, in the Chair.

Symposium on Puerperal Infection.—History.

Dr. Brooks H. Wells opened the symposium with a historical review. He said that the first dawn of truth regarding the nature of puerperal fever had come on that memorable February evening in 1843, when Dr. Oliver Wendell Holmes read an essay in which he boldly declared his belief that puerperal fever was frequently carried from patient to patient by both physicians and nurses. Of course, his position was bitterly assailed by the authorties that day, and history repeated itself when, four years later, Semmelweis demonstrated so strikingly the truth of his idea that much of the puerperal sepsis in that Vienna clinic could be traced to decomposing organic matter carried on the hands of the students from the autopsy room to the lying-in patients. But, to our shame it must be said, the wonderful reduction in the mortality of maternity hospitals that followed the full appreciation of these discoveries has not been realized in private practice.

Pathology and Prophylaxis.

Dr. J. Clifton Edgar said that endometritis was the most common lesion in puerperal infection, and the two principal varieties were septic and putrid endometritis. Two cases were reported to emphasize the curious fact that in some fatal cases of puerperal infection there were no gross evidences of this process. Dr. Edgar condemned the antepartum tub bath, and pointed out the value of sterile rubber gloves and of limiting the number of internal examinations. As yet one could not speak very favorably of antistreptococcus serum, though admitting the great possibilities of this method of treatment.

Intravascular Antisepsis.

Dr. Charles C. Barrows, under this heading, described his further experience with formalin injections in the treatment of puerperal infection. He said that, having met an unfortunate accident during the past winter, he had been prevented from pushing this investigation as far as he had hoped, particularly in the direction of securing control of cases treated only with saline infusion. However, he had observed the effects of the formalin treatment in fourteen cases of profound puerperal sepsis which had failed to yield to approved methods. His own method consisted in injecting into a superficial vein a solution of formalin in normal salt solution at a temperature of 100 F., employing the ordinary technic for saline infusion. In his own experience no injury had been done the blood from the use of this 1 to 5,000 solution of formaldehyd, and convalescence had been exceedingly rapid and satisfactory. He thought this rapid and marked improvement in the patients following close upon the use of the formalin injections, and the negative findings of microscopic examinations of the blood should at least set at rest the question of the possible harmfulness of this mode of treatment.

Iodin Treatment.

Dr. William R. Pryor advocated this treatment. In 1895, impressed with the futility of doing a radical operation in these cases, he had tried curettage of the uterus, followed up, by opening the cul-de-sac and packing with iodoform gauze. He had operated on 37 cases in this manner, only one failing to show the presence of streptococci in the uterus, and even in this case these organisms were found free in the pelvis. In all but one of the cases the streptococci had disappeared after the second dressing, so rapid had been the sterilization of the pelvis by the use of massive iodoform dressings. A sudden fall in the temperature and pulse uniformly followed this operation, and the constitutional effect of the iodin was demonstrated by the occurrence of a strong iodin reaction in the urine in five hours or less. Both the morbidity and the mortality had been decidedly less under this treatment than by any other.

Surgical Treatment.

Dr. Herman J. Boldt read this paper. He said that abscesses should, of course, be promptly opened and drained, but the indiscriminate curetting, which was so prevalent at present, could not be too severely condemned. Hysterectomy should only be thought of in the gravest forms of puerperal infection, and then it was extremely difficult to find the correct indication for such an operation. The occurrence of chills was an important symptom of puerperal infection, especially when followed by high temperature and a rapid pulse, but it was not an absolutely reliable indication of such infection. A bacteriologic examination necessitated the loss of too much precious time. Hysterectomy was indicated in septic phlebitis, or where there were sloughing fibroids. It was true that it was also indicated when there were decomposing substances in the uterus which could not be removed by the natural passages, but such cases were so very rare that he had never met with one.

DISCUSSION.

Dr. Egbert H. Grandin opened the general discussion by saying that he had been in error when, in 1886, he had advocated the use of the curette in this class of cases. Increasing experience had convinced him that the curette should not be used in that form of puerperal infection resulting from the presence in the uterus of decomposing secundines, for, by breaking down nature's barrier to general infection, it led to disastrous results. The proper treatment was the removal of the offending masses by the hand under anesthesia. Uterine irrigations in such cases he believed to be not only useless but dangerous by reason of the added risk of introducing from without such organisms as the streptococcus. Sapremia, as this variety of infection was called, should rarely prove fatal if not needlessly interfered with. While most obstetricians had met cases of streptococcus infection that had suddenly and unexpectedly recovered without formalin injections or Dr. Pryor's iodin treatment, he could not but feel hopeful of good results in the future from the general line of investigation instituted by Dr. Barrows. As for hysterectomy, no living person could say when it was indicated in puerperal infection.

Dr. Henry C. Coe was disposed to think that the line of future investigation should be rather in the direction of searching for an antitoxic treatment. To offset the cases reported by Dr. Barrows, he had a series of six cases of severe puerperal infection successfully treated by the intravenous injection of normal salt solution.

Dr. H. N. Vineberg said that so strong had been the emphasis laid in recent years on the physician's responsibility and culpability in cases of puerperal sepsis that he felt constrained to call attention to the possibility of such infection arising even when the physician had exercised the greatest care. Facts should not be exaggerated or distorted, and recent teaching on this point had had the effect of influencing many private physicians to endeavor to conceal as long as possible the occurrence of puerperal infection. Every puerperal patient having a temperature over 100 F. should be regarded as a possible case of infection, and should be treated promptly in accordance with this suspicion. He did not have the same fear of the curette as Dr. Grandin, and it was well to remember that it was sometimes difficult to insert the finger deeply into the uterus, even when considerable placental tissue was retained. He would not think of subjecting a puerperal patient to operation until he had personally observed her for three or four days.

Dr. B. Torrens reported six streptococcus cases, all successful, in four of which Dr. Pryor's method had been employed.

Dr. S. W. S. Toms, Nyack, observed that the statistics presented did not impress him as being strictly different from those obtained by Clark's opium treatment in the old days.

AMERICAN SURGICAL ASSOCIATION.

Annual Session, held in Washington, D. C., May 12 to 14, 1903.

(Concluded from page 1670.)

Intestinal Localization.

Dr. George H. Monks, Boston, read a paper entitled "Intestinal Localization; A Study on the Cadaver for the Purpose of Determining to What Extent the Various Parts of the Small Intestine May Be Identified Through an Abdominal Wound." Forty cadavers were examined to learn such characteristics as might assist the surgeon to determine the position and direction of any loop of intestine. An intestinal loop was localized principally from the characteristics of the loop itself, or from those of the adjacent mesentery, or from the relation of the loop to the deeper parts of the mesentery. The direction was ascertained by reference to the mesenteric route, which is an infallible guide, although, on account of the twists in the mesentery, it was occasionally difficult to properly apply the test. Diagrams were exhibited.

Tetanus in Gunshot Wounds.

Dr. Louis A. LaGarde, Washington, D. C., read a paper entitled "The Lesions That Augment the Development of Tetanus and Other Infections in Gunshot Wounds," in which he expressed the opinion that the lesions would depend on: 1. The sectional area of the bullet; 2, its velocity; 3, the resistance encountered on its impact. Hematoma especially predispose to infection and increase the danger from tetanus, as is also the case when the wound is burned by powder, etc. He referred to the experiments of Muller and Koller, on which they essayed various methods of treatment of the channel track in gunshot wounds caused by projectiles that were primarily infected, namely: 1. Controls, for which nothing was done. 2. Those treated with a glass drain. 3. Those treated with iodoform gauze drain. 4. Those irrigated with 5 per cent. solution of carbolic acid. 5. Those treated by rubbing with a cotton mop soaked in tincture of iodin. 6. Those treated by cauterizing the wound. All the wounds were dressed with a clean sterile dressing, and the results showed that the animals treated by simple dressing did best of all, and that those treated by radical measures, such as swabbing with iodin and the aplication of the thermocautery, gave evidence of suppuration in every instance.

Old Unreduced Elbow Fractures.

Dr. Emmet Rixford, San Francisco, read a paper entitled "Note on the Operative Treatment of Old Unreduced Dislocations of the Elbow," in which he remarked that the keynote to the situation was sounded by Stenson in a paper read before this association in 1891, in which he showed that the so called fragments of bone which had frequently been observed within the joint, while unquestionably the chief obstacle to the reduction of the dislocation, were in a great majority of cases not fragments broken off the humerus or ulna by complicating fracture, but new growths of bone from stripped up periosteum. He felt that, if the bone be reduced to its normal position shortly after the injury, which is nearly always possible, the function is practically in every case restored, but if allowed to remain displaced until this new bone has formed, manipulative reduction is impossible, and should never be attempted, if force is required. The reason that congenital dislocations treated by manipulative force recovered, he felt was due to the fact that this new growth of bone had not formed, and also that the operation being done in children the joint would often recover from the traumatism.

He then reported cases in which he had employed the Kocher incision, but because of the difficulty in reducing the dislocation, and fear of loosening the periosteum, he had added the procedure of Trendelenburg of section of the olecranon. He commented on the value of the *x* ray as a diagnostic aid.

Asphyxiation in Fecal Vomit.

Dr. E. Wyllys Andrews, Chicago, read a paper entitled "Drowning of Patients in Fecal Vomit During Operations for Intestinal Obstruction and Septic Peritonitis," which, after reporting cases, he summed up as follows:

1. Flooding of the air passages by fecal vomit is a real danger, and probably has caused many unexplained deaths.
2. Resuscitation is impossible or very difficult.
3. The fluid may flow by gravity through the relaxed stomach sphincters directly out of the intestines, where it has accumulated in enormous quantities.
4. The accident occurs with great suddenness with a stomach supposedly empty. The suffocation may be so complete that no outcry is made, and may not be noticed by the attendant.
5. It may occur as late as an hour after anesthesia, or at any time until consciousness is restored.
6. We have no evidence that it can occur during consciousness, even in extremis.
7. After septic laparotomy, patients when returned to bed should be watched, without even momentary intervals, to full consciousness.
8. A suggestion made to me by Dr. McArthur that as many as possible of such cases be operated on under cocain anesthesia seems to me sound in the light of the above report, as well as for other reasons. I have tried both spinal and local cocain

anesthesia in several recent cases, and am convinced that it is a life-saving measure.

Post-Operative Intestinal Obstruction.

"The Pathology and Treatment of Tardy Post-Operative Intestinal Obstruction, with a Report of Cases," was the title of a paper read by Dr. Ellsworth Eliot, New York. This condition is not rare. It is most frequently caused by a paralysis of peristalsis from a spreading or septic peritonitis; it occurs less frequently after laparotomy from a non-purulent condition, even although no infectious material has been introduced at the time of the operation. In this latter group of cases the obstruction is usually of a mechanical nature, and is due to the angular adhesion of one or more loops of intestine to the parietal peritoneum, to each other or to the stump of some recently resected pedicle of omentum or ligated base of tumor, to a possible volvulus, or to the protrusion of a coil of intestine through some accidental orifice in the mesentery or some other peritoneal structure. The symptoms indicating the obstruction develop shortly after the operation and before restoration of the intestinal function has taken place.

Careful exclusion of any kind of mechanical, hermal or chemical irritants from the contents of the abdomen during the primary observation should be observed. Ligatures should not be needlessly employed, drainage should be carefully managed and changed early with subsequent diminution in its amount, or, if possible, its complete removal, while the actual treatment does not differ from the treatment of obstruction arising from any other cause. Several cases were reported.

Dr. F. E. Bunts, Cleveland, Ohio, read a paper entitled "Nerve Injuries to the Shoulder Joint."

Surgery of Cerebral Tumors.

Dr. George Woolsey, New York, emphasized that only a small proportion of all cerebral tumors were fit for radical operation, varying from 2 to 8 per cent., according to various observers by the autopsy records, and averaging about 16 per cent., judging from the records of those clinically diagnosed. He felt that this small percentage of operable cases depended largely on our imperfect means of exact diagnosis and localization and on the inaccessibility of certain parts of the brain to surgical operation.

He gave a résumé of 100 cases, and concluded as follows:

1. The sphere of operation for cerebral tumors may be, and has been, extended to these parts of the cortex where the tumors are accessible and localizable, i. e., to the prefrontal, parietal and occipital regions in addition to the motor area.
2. The prognosis, both immediate and remote, is as good, or even better, than in operations for malignant growths in some other locations.
3. This prognosis has improved with the improvements in localization and operative technic, and with the limitations of radical operations to cases accurately localized.
4. The palliative operation is strongly indicated to relieve the symptoms where localization can not be accurately made, or the tumor can not be removed. The exploratory operation is contraindicated.
5. Practically all circumscribed growths of moderate size are suitable for operation.
6. The osteoplastic method should be employed and the most rapid (and perfect) technic adopted, which the circumstances allow.

Treatment of Surgical Shock by Adrenalin.

Dr. Edward Martin, Philadelphia, read a paper with this title. He gave a résumé of the experiments on animals and a series of clinical cases in which it had been used, one being typhoid perforation and another amputation at the hip joint required by osteomyelitis. He felt that the case of typhoid perforation spoke strongly in favor of the employment of this drug, as he stated he had never before seen a surgical patient so profoundly septic and collapsed make an operative recovery. He recommended that the drug be used in infection in the human subject with caution until its exact effect has been demonstrated.

Drs. W. W. Keen and William M. Sweet reported the case of a boy shot in the forehead, and described methods of localization of foreign bodies in the brain.

Dr. W. Joseph Hearn, Philadelphia, showed a skiagraph of a case in which operation was shown by Sweet's method to be advisable, and was performed successfully.

Drs. W. J. Mayo, Rochester, Minn., and N. B. Carson, St. Louis, reported similar cases.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Nephritic Colic.

Robin, according to an abstract in the *Indian Med. Record*, gives the following principles in the treatment of nephritic colic: To relieve the pain a hypodermic injection of grain 1/6 (.01) of morphin or grain 1/65 (.001) of heroin, and repeat if necessary. However, when a patient is subject to recurrences of these attacks he should have in his possession the following mixture as a means of immediate relief when medical aid is not at hand:

℞.	Potass. bromidi	ʒiss	6	
	Aq. laurocerasi	ʒiiss	10	
	Syrupi etheris	℥i	30	
	Morph. hydrochloridi	gr. 3/4		05
	Aquæ valerianæ	℥iv	120	

M. Sig.: One tablespoonful to be taken every half hour until the pain disappears, but not to exceed four or five tablespoonfuls in all.

In order to aid the elimination of the concretions diuretics should be given. For this purpose the author recommends the infusion of meadowsweet or buckbean given every hour from the beginning of the attack. This infusion may be prepared by placing grains 30 (2.00) of the flowers of either of the foregoing plants in 5 ounces (150.) of hot water. He also recommends mulberry leaves as a diuretic, placing 2 drams (8.00) of the leaves in 17 ounces (500.) of hot water, all of which may be drunk in the course of three or four hours.

Calomel in Pruritus Ani.

S. D. Johns, in *Ther. Gazette*, recommends in the treatment of pruritus ani that dry calomel powder be applied locally. The parts in the region of the anus must be thoroughly cleansed and dried with absorbent cotton, after which about 20 grains of the powder is applied locally with the fingers. In connection with the local treatment small doses of Epsom salts are given by the mouth. He states that the calomel stops the itching almost immediately and permanently checks it after a few applications.

A Rubifacient Cataplasm.

The following method of making a cataplasm is recommended by *Province Médical:*

℞.	Barley pulverized	℥iii	90
	Vinegar	ʒvii	28
	White of eggs No. iii.		
	Aquæ q. s.		

Misce, by making a kind of paste; spread on cloth and dust the poultice over with seven drams of pepper when it is ready for application.

Catheterizing a Patient.

G. M. Cushing, in *The Clinique*, gives the following careful instructions to be followed out in the catheterization of a patient:

1. The instrument should be thoroughly sterilized by boiling and transferred to the hand solution with sterilized forceps.
2. It should be absolutely smooth.
3. It should be lubricated with an aseptic lubricant.
4. It should be introduced without force.
5. The operator's hands should be rendered aseptic by the use of a hand solution.
6. The meatus urinarius should be bathed with an antiseptic solution before the catheter is introduced.

The author further states that a physician's duty to his patient is not fulfilled without the proper exercise of every precaution that will be conducive to his comfort and health.

Intestinal Indigestion.

Hemmeter, according to an abstract in *St. Louis Med. Rev.*, recommends the following in the treatment of putrefactive diarrheas associated with abdominal pain:

R.	Tannigen	ʒi	4	
	Bismuthi subgal.	ʒii	8	
	Salol	gr. xxiv	1	60
	Ext. opii (denarcotized)	gr. iii		20
	Elix. gentianæ			
	Essentiæ calisayæ, āā	℥iii	90	

M. Sig.: Shake and take one tablespoonful three or four times a day.

The foregoing may be prescribed in capsule form, if preferred, by omitting the last two preparations and making twelve capsules. When anorexia is present the following combination is recommended:

R.	Strych. sulph.	gr. 1/3		02
	Acidi hydrochlor. dil.	℥ss	15	
	Ext. condurango flu.	℥iss	45	
	Elix. gentianæ	℥vi	180	

M. Sig.: One tablespoonful in two ounces of water one-half hour before each meal; or:

R.	Tinct. nucis vom.	ʒiiss	10	
	Ess. calisayæ	℥ii	60	
	Elix. gentianæ	℥vi	180	

M. Sig.: One tablespoonful three times a day before meals, in water.

When anemia is present, accompanied by gastric hypochylia, the following combination is of value:

R.	Quin. sulph.	gr. xviii	1	20
	Strych. sulph.	gr. 1/3		02
	Ferri sulph.	gr. xii		75
	Acidi arsenosi	gr. 1/5		013

M. Ft. pilulæ No. xii. Sig.: One pill three times a day. The foregoing pills should be made up fresh and not coated.

Anginal Paroxysms.

The *Clinical Review* recommends the following in the treatment of anginal attacks:

R.	Spts. ammon. arom.	ʒi	4	
	Sodii bicarb.	gr. x		65
	Tinct. card. co.	ʒi	4	
	Spts. chloroformi	m. xx	1	30
	Sol. nitroglycerini (1 per cent.)	m. i		06
	Aquæ q. s. ad	℥iss	45	

M. Ft. haustus. Sig.: To be slowly sipped on the appearance of the attack.

Coryza.

Bjorkman, in *Merck's Archives*, recommends salipyrin in the treatment of acute coryza, administered as follows:

R.	Salipyrini	gr. xv	1	

M. ft. chartula No. i. Sig.: One such powder every two or three hours, between meals, and not too soon before or after a meal. Infants may be given grains 2 (.12) to grains 3½ (.20); older children grains 4½ (.30) to grains 7½ (.50) several times a day.

Ringworm.

In the treatment of ringworm of the scalp, according to the *Indiana Med. Rev.*, the hair should be clipped, the diseased hair carefully depilated, dandruff removed and the following ointment applied at night:

R.	Acidi carbolici			
	Ung. hydrarg. nitratis			
	Ung. sulphuris, āā	ʒii	8	

M. Sig.: Apply locally to the scalp night and morning.

G. T. Jackson, in *Med. Record*, recommends an ointment composed of one dram of iodin crystals to the ounce of goose grease. This ointment should be applied twice daily until the proper reaction is produced, as shown by a little swelling of the patch, then once a day. No epilation is necessary. When applied to the bearded portion of the face it is more painful than when applied to the scalp. If much swelling is produced the ointment should be suspended for a few days, and a 3 per cent. salicylated oil may be substituted until the swelling subsides when the application of the ointment may be resumed.

The author states that barber's itch will yield to this treatment within three weeks' time. If an obstinate case, which will not yield to this treatment is met with, the following may meet the needs of the case:

R.	Olei tiglii	ʒi	4	
	Ung. sulphuris	℥i	30	

M. Sig.: Apply locally night and morning. A severe dermatitis may be set up as a result of this application, and the patch may become perfectly bald, but the hair will finally grow in again and the disease destroyed.

Tapeworm.

The following outline of treatment is recommended by George R. Mitchell in *Med. World* in the treatment of tapeworm: The evening before administering the anthelmintic the patient should be instructed to eat a light supper, and at bedtime from three to five tablets similar to the following should be taken:

R.	Hydrarg. chloridi mitis			
	Sodii bicarb., āā	gr. i		06

M. Ft. tabla No. i. Sig.: Three to five such tablets at bedtime. The following morning the patient should take a glass of hot milk or cup of coffee; within one hour an ounce of the following should be taken:

R.	Pelletierin	gr. v		30
	Olei aspidii	ʒi	4	
	Spts. chloroformi	gtt. xx	1	30
	Syr. acaciæ, q. s. ad	℥ii	60	

M. Sig.: Two tablespoonfuls in the morning.

After waiting one hour one tablespoonful of the following should be administered:

R.	Olei tiglii	gtt. ii		12
	Olei ricini	ʒiv	15	
	Glycerini	ʒiv	15	
	Olei cinnamomi	gtt. ii		12

M. Sig.: One tablespoonful at a dose. If, after the foregoing has operated, the head of the worm is not obtained the above process should be repeated.

According to the author this treatment is very efficient in the treatment of tapeworm.

Crurin in Gonorrhea.

Dr. R. Stern, according to an abstract in *Merck's Archives*, recommends crurin, which is quinoline-bismuth sulphocyanate, in the treatment of gonorrhea. He uses it according to the following formula:

R.	Crurin	gr. xv	1	
	Glycerini	ʒi	4	
	Aq. destil.	℥viss	200	

M. Triturate the crurin in the glycerin and add the water gradually. Sig.: To be used as an injection two or three times daily for two weeks.

Seasickness.

Binz, according to an abstract in *Month. Cyc. of Med.*, states that seasickness is produced by the rocking of the ship, producing contraction of the arteries of the head and consequently causing anemia of the brain. This local anemia in turn causes nausea and vomiting. The stomach consequently is of only secondary importance, as the vomiting is of central origin. Everything, then, according to the author, that tends to increase the flow of blood to the brain aids in ameliorating the symptoms or producing a cure.

The treatment consists in assuming a horizontal position, and in administering remedies which tend to dilate the cerebral arteries. Among these are mentioned chloral hydrate in doses of grains 5 (.30) three or four times within a few hours.

The inhalation of two or three drops of amyl nitrite is of service. Potassium bromid and antipyrin in medium doses have also been well recommended, together with a full meal before boarding the ship.

A combination containing cocain is sometimes preferred in the treatment of seasickness in order to lessen the gastric hyperesthesia. It may be combined with menthol with advantage, as follows:

℞.	Menthol	gr. ii		12
	Cocainæ hydrochlor.	gr. ii-iii		12-.20
	Syrupi	℥i	30	
	Alcoholics	℥ii	60	

M. Sig.: One teaspoonful every two hours.

Or, according to *Merck's Archives*, the cocain may be combined with resorcin as follows:

℞.	Resorcin (resublim)	ʒi	4	
	Cocainæ hydrochlor.	gr. ii		12
	Bismuthi subnit.	ʒii	8	

M. Ft. chart. No. xxiv. Sig.: One powder every two hours.

Yeo recommends creosote and carbolic acid in the treatment of seasickness, given as follows:

℞.	Creosoti	m. x		65
	Acidi acetici	m. xx	1	30
	Morphinæ sulph.	gr. ss		03
	Aquæ q. s. ad	℥i	30	

M. Ft. mistura. Sig.: One teaspoonful every half hour for three doses; or:

℞.	Acidi carbolici	gr. i		06
	Spts. chloroformi	m. iv		25
	Spts. vini rect.	ʒss	2	
	Aquæ q. s. ad	℥i	30	

M. Ft. mistura. Sig.: One half to be taken immediately and repeated in half an hour.

Medicolegal.

Curvature of Leg Not Physical Unsoundness.—The Court of Appeals of Maryland holds, in Maryland Casualty Company of Baltimore vs. Gehrmann, where an applicant for a policy of accident insurance warranted that he was in sound condition physically, that if he had a curvature of the leg, which rendered it more susceptible to injury from a blow or fall, it did not constitute a breach of the warranty. It says that a defective leg is not necessarily an unsound leg, and susceptibility to inflammation from future accident is not present physical unsoundness.

Measure of Damages for Malpractice Where Death Ensues.—The Supreme Judicial Court of Maine holds, in Ramsdell vs. Grady, that a physician who fails to exercise reasonable care and diligence in the treatment of his patient is liable for malpractice. The liability of a physician for malpractice is based on his implied agreement with his patient that he possesses the ordinary skill of a physician under like conditions, that he will use his best skill in determining the nature of the malady and the best mode of treatment, and that he will exercise reasonable care and diligence in the treatment. In this case, where the physician was called on Monday, sent the patient some 135 miles or so to a hospital on Friday, and the patient died on Saturday, the administratrix who brought the action contended that by the exercise of reasonable skill and care the case should have been diagnosed as diphtheria, which was not done, in consequence of which the patient became increasingly ill, and died as stated. The physician, on the other hand, maintained that the disease was not diphtheria, or, if it was, that it did not present any apparent symptoms of diphtheria; that, if it was diphtheritic at all, it was laryngeal, and of a kind the distinctive symptoms of which might not be discoverable by the diagnosis of an ordinarily skilful and careful physician, and that in all respects reasonable care and skill had been exercised. There was much evidence on both sides, and the court contents itself with the brief statement that in finding the physician liable it was not clear that the jury had erred, and the verdict in that respect must stand. But the amount of damages awarded, $3,000, the court thinks unmistakably too large. Only such damages could be allowed as the deceased sustained in his lifetime. Nothing could be allowed for his loss of life, nor for what he might have earned had he lived longer. The administratrix was entitled to recover, for the benefit of the estate, such damages as the deceased suffered up to the last moment of his life, and no longer. This rule might include loss of earning, though in this case that was inconsiderable. It did include expense to which the deceased was put, or for which he became liable, on account of the wrong of the physician. It also included mental and bodily suffering up to the moment of death. It only included, however, such injury, expense, and suffering as was due to the physician's default in excess of what they would have been had the case been properly diagnosed and treated. In this case, the only damages of any amount which the deceased sustained were those resulting from mental and bodily pain. He was unable to lie down or to sleep much. He found difficulty in breathing, and occasionally had strangling spells. He was very weak. He could eat or drink only with great difficulty. There was a strong probability that at times he was in apprehension of death, though the evidence bearing on that point was chiefly inferential. Taking into account all of the evidence, viewed as liberally in support of the verdict as it might properly be, the court thinks that the verdict should not be allowed to stand for more than $1,500.

County Not Liable for Disinfecting After Smallpox.—The Iowa case of Schmidt vs. Muscatine County was brought to recover for services rendered in disinfecting houses with contents, in which persons afflicted with smallpox had resided or had been kept, at the expiration of the quarantine period, and before they were permitted to depart and mingle with the people. The party suing alleged, among other things, that he had been employed by the board of health of the city of Muscatine to disinfect these places; that such disinfection was necessary for the protection of the public health; that the materials used therefor had cost some $93; that neither the persons for whom the services were rendered nor those legally responsible therefor were able to pay; that the houses disinfected were the homesteads of the parties occupying them; and that the claim duly certified by the board of health had been presented to and rejected by the board of county supervisors. Were these services, under the circumstances alleged, proper charges against the county? The Supreme Court of Iowa says that the statutes must answer this question. But, it adds, it finds none requiring the county in any contingency to meet the expense of staying the spread by cleansing the personal property or realty of individuals. Section 1040 of the Iowa Code relates to the care of the sick or infected individual by removing to a separate house, if it can be done, and for providing nurses and other assistance and supplies, if necessary, at county expense. Section 1040 provides that, in event removal would be dangerous to health, the board shall make provision for the patient in the house in which he may be, and in such case may cause the persons in the neighborhood to be removed, and take other means as may be deemed necessary for the safety of the inhabitants. The Supreme Court holds that by no reasonable construction can these sections be said to involve the cleansing of personal property or realty for the sole purpose of preventing or staying the spread of disease. The object in fixing responsibility for the expenses on the county in event it can not be otherwise collected is to secure to the indigent humane treatment through isolation without hazarding the safety of the public. But that responsibility extends no further than to effect this object. With the recovery of the patient its liability ends. It was not the intention of the statutes to cast the burden of destroying the seeds of disease on the unfortunate victim alone, but rather leave that for those directly benefited thereby, or the local municipality. If there be personality or realty which ought not, in its present condition, to be used without renovation, can there be any doubt as to who should meet the expense necessary to render it available for use? The owner is primarily interested, and will be directly benefited. The situation may be due to no fault on his part. It certainly has not resulted from any wrong done by the county. It is incident to the ownership of the property, and the court can think of no reason for relieving the owner from his obligation to care for his own, and to do so as that it shall not become or continue a menace to the health and welfare of the community. Evidently, it says, the legislature entertained this view concerning the obligations of private ownership in enacting Section 1037 of the Code, which provides that when premises become unfit for habitation, and a cause of nuisance or sickness, the board of health may cause same to be properly cleaned at the expense of the owners, after notice to the occupants Then, Section 1044 provides for making a special assessment against property of expenses incurred in consequence of the failure of the owner or occupant to comply with an order of such board or the city. A homestead is not exempt from special assessments. However, in any event, in the absence of any statutory provision such expenses could not be incurred at the expense of the county On the other hand, the expense of disinfecting the county's pesthouse might have been a proper charge had the owner been first notified and given an opportunity to do the work itself

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 6

1 *Perforating Gastric and Duodenal Ulcers: Unilateral Exclusion of Duodenum for Perforating Ulcers of Its Posterior Wall Albert A Berg
2 *Results of Preventive Medicine in Providence, R I, 1885 1902 Frederick S Crum
3 Fatal Gastric Hemorrhage with Autopsy Marshall L Price
4 *The local Treatment of Acute and Chronic Gonorrhea. R. O Kevin
5 Preliminary Report of a Successful Operation for the Radical Cure of Complete Prolapse of the Rectum of Sixteen Years Duration in a Case ohn R Knapp
6 A Case of Adherent ischarged After a Long Process of J C Josephson
7 Non operative Treatment of Chronic Mammary Tumor. A G Henry
8 A Classification of Intranasal Diseases for Use in Teaching Carl E Munger
9 A Hint in Urinary Analysis for General Practitioners Louis F Bishop

1 **Perforating Gastric and Duodenal Ulcers**—Berg describes the symptoms and pathologic conditions in perforations of the stomach or duodenum and the conditions that occur according to their situation, and discusses the question of operation and the time in which to operate Where symptoms of perforation and extravasation into the free peritoneal cavity are present, the prognosis would depend on how soon after rupture the abdomen was opened and the perforation closed He thinks, however, that though this waiting will sometimes entail risks of diffuse peritonitis, that an exploratory laparotomy for supposed perforation is not advisable Even where symptoms of perforation occur, but there is no gas in the free peritoneal cavity, the question of waiting may be raised It may be advisable in some cases to wait a few days, while firm adhesions form around the local extravasation Operation, however, should not be too long deferred, as such localized exudates sooner or later make their way into the subphrenic space, and unless evacuated and drained are liable to rupture through the diaphragm, pleura or lungs He gives an illustrative case In the case of perforated ulcer situated on the anterior wall of the stomach, it is easy to effect closure as a rule, but where it occurs on the posterior surface, he believes it better to evacuate and drain the extravasated material through the retrogastric space by lumbar incision and avoid soiling the peritoneal cavity. Then he would open the abdomen, perform a gastrojejunostomy and constrict the pylorus with a purse string suture. This excludes the perforated duodenum from the intestinal circuit and prevents leakage of chyme through the fistula This procedure, he thinks, is better than jejunostomy, as gastric digestion is not destroyed The duodenal rupture must necessarily close spontaneously by granulation, as there is nothing to keep it open He has not reported any cases thus operated on, however, but it was his intention in one to perform this operation, but the wretched condition of the patient prevented

2 **Preventive Medicine.**—Crum reports the results of sanitary methods in Providence, R I, during the period of eighteen years, 1885 to 1902. During that time the typhoid death rate per 10,000 population has been reduced from 4.5 to 2.2 and the percentage of cases resulting fatally from 35.4 to 23.8 per cent. The diphtheria mortality has been reduced from a ratio of 7.1 to 3 per 10,000 population, the case fatality from 32.9 for the period between 1885 and 1890 to 12 per cent. for the period from 1897 to 1902. The scarlet fever mortality has been likewise reduced from 1.4 per cent. to .6 per cent. per 10,000 population, and the case mortality from 15.7 to 2.9 per cent. These ratios are calculated on three periods of six years each, from 1885 to 1890, 1891 to 1896 and 1897 to 1902 The figures seem to show improved methods of diagnosis and more skilful medical treatment, which must play a large part in bringing about these results.

4 **Gonorrhea.**—Kevin advocates the use of argyrol in gonorrhea, finding it the most satisfactory antiseptic It not only is free from the unpleasant sensations accompanying the use of the nitrate of silver, but the relief of symptoms and general therapeutic effect on the pathologic conditions are better.

American Medicine, Philadelphia.

June 6

10 *The Symptomatology and Diagnosis of Diseases of the Pancreas Reginald H. Fitz.
11 *The Medicolegal Test of Blood Stains F N Layton.
12 *Isolysins in the Serum of Disease. S Peskind
13 Modification of Milk for Infant Feeding Edwin E Graham
14 *The Inefficiency to Restore Pelvic Support of Immediate Suture of Lacerations Sustained During Labor William E Ground.
15 An Interesting Case of Endocarditis with Fatal Termination Frederick G Canney.

10—See abstract in THE JOURNAL of May 30, p. 1524.

11. **Blood Stains.**—Layton gives the results of experimental studies to ascertain whether it is possible to prove blood stains to be of human blood, and whether the proposed test is always a specific or its accuracy modified by the age of the stain and the mixture of other blood, and whether the proposed test is sufficiently accurate and invariable for medicolegal purposes. He reviews the literature of the subject at some length, and reports his experiments and details his methods. From his studies he concludes that the test is in truth specific, invariable, and therefore applicable to forensic use. He specifies as follows:

1 The reaction is caused by the development within the blood serum of the injected animal of an antibody or a property or substance which causes a certain reaction with the serum homologous to the one injected

2 The reaction does not occur when normal rabbit serum is used

3 The reaction occurs much more rapidly, especially when dilute solutions are used, if the test is exposed to a temperature of 37 C, although it will occur at ordinary room temperature

4 An immediate result in the cold is obtainable by diluting only the blood tested, the test serum being used pure

5 The reaction is obtainable when using a dilution of the test serum of 1:20,000, or of the blood tested of 1:4,000 Hence, only a minute stain and a single drop of the test serum are required for making the test

6 The delicacy of the test is not altered by the admixture of other bloods or of other foreign material, except the albumin precipitants

7 The presence or absence of mineral salts, such as copper sulphate, or of other precipitants of albumin, can be determined by the control tests

8 The delicacy of the test is not materially altered by the age of the stain

9 A differentiation from monkey blood is possible, and contamination with monkey blood can be excluded, first, by a great dilution of the blood tested and a dilution of the test serum of 1:500, with incubation, second, by a great dilution of the blood tested, the test serum being used pure, and the test made at room temperature.

Since writing his paper he has made tests with the blood of white and colored persons to determine whether there is any difference in the reaction of the blood of the two races. The reaction occurred more slowly than usual, but at the end of five hours in the incubator at 37 C. all the tubes were equally turbid and the characteristic flocculent precipitate soon formed. The control tests of normal rabbit serum remained unchanged as usual

12 **Isolysins.**—Incited by the observation of the presence in a leukemic patient of an isolysin, that is, a substance causing hemolysis of human blood corpuscles, Peskind has studied the sera in other diseases to determine whether isolysins were present, and if so, whether they were specific or not. It appeared to him that the study might be of some practical advantage If it were found, for example, that the serum of a patient with cancer would lake human blood corpuscles, but

would not lake the corpuscles of a known case of cancer, the inference would be that the suspected patient really suffered from cancer. He describes his technic and gives details of the test in leukemia, anemia, pneumonia, gastric cancer, typhoid, uremic coma and uremia. The sera of two cases of typhoid and a uremic case caused absolutely no laking of the normal human blood corpuscle for two or three days, even though drying out had occurred at the ends of the tubes, but the sera in all these cases produced a rapid laking of each other's blood corpuscles, the laking beginning at the ends of the tubes where a slight drying out had occurred. This is, he thinks, in all probability due to the lowered resistance of the blood corpuscles in these diseases to the hyperisotonic solutions. Guthrie has shown that normal blood corpuscles, after drying, are rapidly laked by the addition of serum or normal saline solution. In none of Peskind's experiments with normal bloods was laking observed for several days, probably because no mixing of the serum and dried corpuscles had occurred. In the case of the diseases above mentioned he thinks it probable that the envelopes of the corpuscles deteriorated and became more permeable, making them more readily laked during the drying-out process than is normally the case.

14.—See abstract in THE JOURNAL of January 10, p. 119.

New York Medical Journal.

June 6.

16 *[illegible] Practice. Ferd. C. Valentine.
17 [illegible] ary Nephrectomy on the Left Kidney, [illegible] on the Right. John F. Erdmann.
18 Blepharitis Marginalis. Dudley S. Reynolds.
19 *A Consideration of the Operative Methods for the Cure of Astigmatism. A. E. Davis.
20 *The Management and Prophylaxis of Intestinal Diseases in Infants During the Summer. Charles G. Kerley.
21 *Renal Decapsulation for Puerperal Eclampsia. George M. Edebohls.
22 *Torsion of the Testicle. W. W. Williams.
23 Neuritis from Whooping Cough, with Report of a Case. Charles J. Aldrich.

16. **The Cystoscope in Practice.**—Valentine describes a cystoscope phantom consisting of a disc divided into quadrants with certain objects pictured on it and reflected into a mirror in the lid of the box. In the front of the box is a hole, representing the urethral lumen. The experimenter can use a sound touching the various points as shown in the reflection on the lid. He also has a larger size of phantom which contains a rubber hemisphere in which the lower two-thirds of the bladder are pictured just as they occur during life. A mirror movable in all directions shows the images of the lower two-thirds of the bladder as they appear through the cystoscope. The various anteroposterior and lateral angles at which the mirror is turned to the hemisphere below it, show the distortions in which each point appears as conveyed to the eye by the cystoscope. Practice with this device is identical with that described in connection with the small box phantom, except that the instruments are inserted through a slightly different orifice. When the student has acquired familiarity with localization of the various parts of the bladder in this phantom, he may safely use a cystoscope for that final practice which is preparatory to examination of the bladder in the live subject. No attempt to use the instrument on the living being should be made before the student has learned intelligently to inspect all parts of the bladder of the phantom while avoiding contact of its walls with the beak of the sham or true cystoscope. He also describes the ureter-catheter simulacrum, which should be used for such experiments.

19. **Astigmatism.**—Davis warns against the operative treatment of astigmatism where glasses can be worn with any degree of comfort. None of the proposed operations for its cure is justifiable except in extreme cases, such as keratoconus, where the condition can not be rendered much worse in any case. Tenotomy of the recti muscles primarily for the cure of astigmatism should never be undertaken.

20. **Summer Disease of Infants.**—Kerley insists on the importance of the discontinuance of milk in summer diarrheas of infancy and the substitution of carbohydrates in some form of the cereal gruels for the milk feeding. There are a few drugs which, in connection with this, possess a considerable worth, such as calomel in small repeated doses to relieve vomiting, castor oil in a two teaspoonful dose, and bismuth subnitrate in pretty large doses sufficient to render the stools black. Opium, when there is tenesmus and straining is indicated, preferably in the form of Dover's powder in 1/4 to 1/2 grain doses at two hour intervals in children 6 to 18 months of age. Colon irrigation has been overdone, though an excellent measure. It is indicated with a high temperature, and in bowels where there is something to be washed out. A normal saline solution is best for this purpose, especially in cases where there has been rapid loss of flesh on account of excessive loss of fluid. In these cases he endeavors to have one-half a pint or more of water retained. The water will be best held when it is placed well up in the descending colon, the child resting on its right side with the buttocks slightly elevated. The discontinuance of milk is sometimes necessarily permanent and each case is a rule unto itself. There is no uniform rule when a milk diet should be resumed. Other than the above he treats his cases symptomatically; stimulating the heart, sponging with alcohol and water and occasionally small doses of morphin hypodermically 1/30 to 1/60 of a grain, guarded by atropin, to reduce shock. In vomiting, diet, stomach washing and gavage or forced feeding are the only measures of value. He speaks in regard to prophylaxis. The best is a well-fed baby all the year round, and he gives points as to the instruction of mothers in the proper way of caring for their infants. The duty of the physician is to prescribe suitable food, instruct the mothers what to do on the first sign of gastrointestinal trouble, and the danger of slight gastrointestinal disorder in summer should be made plain. There should be a district visiting nurse to teach mothers how to clean nursing bottles, bathe and air the babies, etc.

21.—See abstract in THE JOURNAL of June 6, 1596.

22. **Torsion of the Testicle.**—Williams reports a case of this accident and describes the symptoms, which are those of epididymitis or orchido-epididymitis occurring suddenly and often without apparent cause, and during active muscular exertion. The diagnosis depends mainly on the suddenness or severity of the symptoms and the absence of other sufficient cause for the acute inflammation. The epididymis may be found in front of the testis, and in one case a nodulation corresponding to the twist was felt.

Philadelphia Medical Journal.

June 6.

24 *The Qualities Essential to Success in Medicine. W. W. Keen.
25 *A Brief Sketch of Malaria, Diseases and Conditions of the West Coast of Africa. Alfred A. Loeb.
26 The Treatment of Otitis Media Suppurativa Acuta. S. MacCuen Smith.
27 *Wounds Inflicted by Modern Agricultural Instruments. D. W. Basham.
28 *A Plea for the Abandonment of the Abdominal Belt After Celiotomy. Maurice Kahn.
29 *Some Observations on Tuberculous Patients Sent to Colorado. S. Simon.
30 *The Influence of Certain Alcoholic Liquors, and Tea and Coffee, on Digestion in the Human Stomach. Richard F. Chase.

24. **Success in Medicine.**—The four greatest essentials considered by Keen are: 1. Good moral character; 2, good manners; 3, perseverance; and 4, studiousness. He has never known a man to fail of achieving an honorable and enviable success who has had these four.

25. **Malaria, Etc., of West Africa.**—Loeb describes the diseases that prevail on the west coast of Africa, first, malaria, which is much severer than in America, and well known as "coast fever" by the traders. He remarks that it attacks without giving any warning whatever, and details cases illustrating this fact. The hemorrhagic form of malaria is common and quinin given internally often aggravates it. Small doses of a solution of arsenic or of quinin hypodermically are useful. The "sleeping sickness," so-called, is not as common as one would suppose. It occurs most frequently near the equator. "Craw-craw," a papulo-pustular skin eruption, is common among the tribes of the west coast, especially among those that swim in the ocean a great deal. As far as he can observe the disease is contagious. Filaria loa, the most distressing of all ocular disturbances, burrows beneath the conjunctiva. "Jigger" is a burrowing parasite, easily removed. Ainhum is frequently

met, and it is not rare to see natives with one or more toes missing on either foot. It is apparently painless. Guinea-worm disease is fairly widespread, and elephantiasis is frequently seen, that of the leg being the most common, the scrotum next. Beri-beri is by no means as uncommon as supposed to be, and is often attributed to rice eating. Its mortality is not alarmingly high. Leprosy is not as frequently met with on the coast as in Madeira, Teneriffe and others of the Canary Islands. Smallpox, the most dreaded disease, decimates the villages, but vaccination has proven effective in many places. Venereal diseases are common, both in the natives and white traders. Hydroceles are common, often reaching an enormous size. Umbilical hernia is frequent. Meningitis is a common cause of mortality among children. Osteomyelitis is not uncommon among children in some of the villages. It is usually fatal. Dengue most frequently attacks white traders. Phthisis is frequently seen among the tribes of the northwest and southwest coast. Those of the middle west are not altogether free from it, but nearly so. Dysentery is a marked disorder, and fatal as a rule, as in all tropical countries. Cardiac diseases of all forms are frequently seen. Rheumatism is fairly common among the tribes living on the low, marshy grounds, the inflammatory form predominating. He says:

> I would advise any one visiting the west coast of Africa for the purpose of study to provide himself with a mosquito-net, an abundance of light clothing and a large helmet. As fresh food is often scarce, a good supply of the best canned foods should be always on hand. To live as far away as possible from the native villages is advisable. As there is no sanitation, the villages, therefore, are not the most pleasant places to be near. Never sleep in a native hut, as they are often overrun with vermin. Do not partake of native food, except under compulsion, as it is very far from being palatable. In many places good fresh water is unobtainable; the traders use rain water, which they store up in tanks and which, unless boiled and filtered, should not be used.
>
> Hunger is greatly increased, but it is advisable to refrain from eating too much and too frequently. It is best to divide the meals as follows: At 6 a. m. take coffee or tea (if good water is obtainable); at 11 a. m. take the noonday meal, and at 6 p. m. the evening meal, eating what food you may deem the best. Do not eat too freely of fruits.
>
> It is advisable to rest from 11 a. m. until 3 p. m. Keep out of the sun's rays.
>
> During the rainy season provide yourself with the proper covering.
>
> With these few little (?) drawbacks, by having good scientific instruments, there is plenty of interesting work to be done.

27. **Wounds from Modern Agricultural Implements.**—Basham calls attention to injuries received by farmers from agricultural machines; traumas inflicted by reapers, threshers, corn harvesters and the corn knife, with their special characteristics. These are generally received during work in the field beyond the reach of the surgeon specialist, hence the importance of the general practitioner being able to treat them. The tendency of these injuries to sever the tendons and nerves and in certain instances the blood vessels, calls for not only prompt immediate action, but attention to function restoration. Of all the wounds none are so serious as those inflicted by the threshing machine and the cotton gin. In the one case the hand is always reduced to shreds by the action of the teeth in the cylinder, and in the other the member is cut into strings by the saws. In both cases amputation is generally required. Exposure of the nerves causes them to be very painful. He notices also the dangers from the harvesting-machine and its resemblance to the ancient war chariot in some respects. It produces a smooth incised wound, which sometimes causes fatal hemorrhage before help can be obtained, in many cases cutting not only the soft parts, but the bone, especially in children. He says one should never despair of a limb as long as the blood supply is adequate. Corn knife injuries of the knee are very common, and formerly many such injuries were followed by ankylosis.

28.—See abstract in The Journal, xxxix, p. 1132.

29. **Tuberculosis.**—According to Simon the incipient and first-stage cases of tuberculosis do well in a Colorado climate if they are placed in a favorable environment and receive proper medical advice. In acute tuberculosis, however, the change is apt to be damaging. The great trouble is that incipient consumptives do not take good medical advice or live under proper conditions, poverty and sometimes bad advice interfering. The amount of exercise to be taken is one of the things in regard to which they should be instructed. They are too often told that to drink plenty of milk, eat fresh eggs and exercise in the open air will cure them. Homesickness is another reason why many persons do not succeed in a Colorado climate. As to cases in the second stage it is a matter of expediency. They often fail to get along under the most favorable conditions. A patient should not go to Colorado without sufficient means on which to live for a year or two. The third stage cases, with cavities, should, as a rule, avoid Colorado. Some get well, but the majority succumb. The personal equation in each patient should be considered. He speaks in favor of sanatoria, though there are cases, however, that do best outside.

30. **Stimulants and Digestion.**—Chase has investigated the effect of alcohol in the form of beer and whiskey, and of tea and coffee on digestion. He finds that salivary digestion was slightly delayed by whiskey, but somewhat accelerated by beer, but the influence in these cases was insignificant. Peptic digestion, both in the stomach and in the test-tube, was noticeably delayed by whiskey, and still more by beer, in the latter case entirely out of proportion to the amount of alcoholic content. Secretion was probably somewhat increased by whiskey and may have been slightly stimulated by beer. Generally speaking, it would seem that liquor, taken as a beverage, exerts, on the whole, only a harmful influence. In case of gastric disease its use is not followed by any beneficial results. As regards tea and coffee, he quotes some opinions against their use, but thinks them preferable to alcohol. Both the strength and amounts used by him were sufficient to show any harmful effects that might be produced by such liquids. While admitting the harmful effect of large quantities, and that even moderate amounts, when taken with sugar and cream, disagree with some individuals, he believes that an undue prejudice has been excited against the use of these beverages by the results obtained in laboratory experiments.

Boston Medical and Surgical Journal.

May 28.

31 *The Relation of Chronic Enlargement of the Spleen to Anemia in Infancy. John Lovett Morse.
32 The Report of Three Cases in Which Embryos of the Strongyloides Intestinalis Were Found in the Stool—Autopsy of One Case. Phillip K. Brown.
33 A Case of Gunshot Wound of the Stomach. Operation. Recovery. Hugh Williams.
34 A Case of Multiple Fibromata (Fibroma Molluscum) and Serous Cyst of Neck. David D. Scannell.

June 4.

35 *The Symptomatology and Diagnosis of Diseases of the Pancreas. Reginald H. Fitz.
36 *Small Contributions to the Surgery of the Intestinal Tract. Joh. von Mikulicz.
37 *The Surgery of the Simple Diseases of the Stomach. B. G. A. Moynihan.

31. **Anemia in Infancy.**—Morse has studied the relation of chronic enlargement of the spleen and anemia in infancy to each other to see whether any proper ground exists for the recognition of special forms of anemia, known as the splenic anemia of infancy, anemia infantum pseudo-leukemia, etc. He notices the differences that normally exist between the blood of infants and that of adults, and the special tendency to enlargement of the spleen in the former. He reports a large number of cases and analyzes in detail the special conditions and the symptoms found; the relation of enlargement of the liver, lymph nodes and spleen to each other; the relation of the number of red corpuscles and the amount of hemoglobin to the size of the spleen, as also that of the white corpuscles and the proportion of each; the etiology of the condition and its prognosis. In all but two of the cases rickets was present, and disorders of the gastrointestinal tract were noted in all. He thinks it justifiable to conclude that when anemia, splenic tumor and enlargement of the liver or lymph nodes are found in association in infancy, they are in no way dependent on each other, but all manifestations of a common cause, disturbance of nutrition. There is nothing characteristic in the blood changes found in association with enlargement of the spleen, as like changes are found when there is no such enlargement; the anemia is secondary rather than primary and there is no justification for placing the cases of anemia in infancy with enlargement of the spleen or liver in a class by themselves, and calling it a special disease. The term splenic

anemia of infancy or anemia infantum pseudo-leukemica should, therefore, be dropped from our nomenclature. The prognosis in these cases depends more on the condition of the blood than on the size of the spleen. The latter has no influence on the prognosis.

35.—See abstract in The Journal of May 30, p. 1524.

36.—Ibid., June 13, p. 1668.

37.—Ibid.

Medical News, New York.

June 6.

38 *The Surgery of the Simple Diseases of the Stomach. B. G. A. Moynihan.
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Cincinnati Lancet-Clinic.

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Pennsylvania Medical Journal, Pittsburg.

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Pediatrics, New York.

May.

54 *A Case of Congenital Heart Disease with Interesting Eye Findings. Samuel McC. Hamill.
55 *Epidemic Parotitis with Metastasis to the Female Genitalia; with a Report of a Case. George McNaughton.
56 Masturbation in the Young Girl a Cause of Acquired Sexual Perversion. William Lee Howard.
57 Raw Cow's Milk in Infant Feeding. Elias H. Bartley.

54. **Congenital Heart Disease.**—The case reported by Hamill was that of a boy nine years of age, with intense cyanosis, dyspnea, precordial pain, the heart sounds somewhat indefinite for the perfecting of a specific diagnosis as to the lesion. A peculiar feature of the case was the great enlargement of the retinal arteries and veins to several times their common size, which was attributed to the cyanosis. There are apparently few cases noticed in the literature of this special condition of the eye ground.

55. **Parotitis.**—M'Naughton reviews the subject of parotitis, especially in its extension to the female genitals, and concludes that its localization in the ovaries is more frequent than mentioned in the literature. The chief reason it is less observed is probably because these organs are less accessible to examination.

Journal of the Michigan State Medical Society, Detroit.

June.

58 Impetigo. Wm. F. Breakey.
59 The Etiology of Pelvic Inflammatory Diseases. Richard R. Smith.
60 The Conservative Treatment of Pelvic Inflammatory Diseases. R. E. Balch.
61 *Boiling as a Method of Sterlizing Catheters. C. B. Nancrede and W. H. Hutchings.
62 *Mydriatics in Refraction of Presbyopes. O. A. Griffin.

61. **Catheter Sterilization.**—Nancrede and Hutchings have studied the effect of catheter sterilization methods, and find that the larger the size the quicker the sterilization, and also that filling with ordinary tap water which expels all air, reduces the time three-fourths. An infected rubber catheter can not be completely sterilized by boiling under four and a half minutes, that is, after artificial infection. Mechanical cleansing of the catheter of old dried pus and blood vessels will render the process easier. The English web catheter and soft rubber catheters may be repeatedly boiled for five or more minutes without roughening the surface or diminishing their elasticity or strength. Chemical sterilization by immersion in a 1/2,000 mercuric chlorid solution for five minutes does not sterilize any variety of catheter which has become infected. If corrosive sublimate is employed, it must be in a concentrated solution, and the catheter must remain in it for a much longer time than the usual period considered amply sufficient in the laboratory, no mere washing with any chemical solution being efficient for an infected instrument. Formalin vapor will sterilize instruments in twenty-four hours. How much shorter time will be sufficient has not yet been determined. All methods of sterilization should be continued for longer periods than the minimum time required for the laboratory destruction of the germ. The English web catheters are apparently more easily sterilized by heat than the soft rubber ones. The authors find that, while washing with warm soap suds is an excellent thing, it is not absolutely necessary. Oily lubricants are removed by boiling, and carry away with them numerous germs. The English web catheter can be boiled for any length of time without damage in a saturated solution of ammonium sulphate. This boils at a little higher temperature than water (104 C.) and is, therefore, superior, but subsequent washing in sterile water is necessary to remove the crystals that are deposited. The only precaution required is to prevent the catheter coming in contact with the bottom of the vessel. These experiments prove that heat can be successfully employed with all varieties of catheters, with the exception of the soft French instrument, provided that all air is expelled from the interior. In the great majority of cases five minutes immersion in boiling water may

anemia of infancy or anemia infantum pseudo-leukemica should, therefore, be dropped from our nomenclature. The prognosis in these cases depends more on the condition of the blood than on the size of the spleen. The latter has no influence on the prognosis.

35.—See abstract in THE JOURNAL of May 30, p. 1524.

36.—Ibid., June 13, p. 1668.

37.—Ibid.

Medical News, New York.

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sterile gauze and keeps moist for forty-eight hours with some sterile solution. After this he irrigates with sterile water, dries and dusts with any antiseptic powder. The most frequent mistake is to change the dressings too often. In some cases he uses a sort of wire gauze muzzle over the hand to keep the wrappings from immediate contact with the wound, and finds it aids nature in taking care of the case.

Atlanta Journal-Record of Medicine.

May.

100 *The Sin of So-called Conservative Medical Treatment in Diseases Requiring Prompt Surgical Intervention. Floyd W. McRae.
101 *The Treatment of Carcinoma of the Cervix. Virgil O. Hardon.
102 Spinal Curvature. Theo. Toepel.

100. Conservative Medical Treatment in Surgical Cases.—McRae protests against the so-called conservative medical treatment in cases requiring surgical intervention, and gives illustrations of its bad effects from his experience.

101. Carcinoma of the Cervix.—Hardon emphasizes the importance of prompt repair of cervical lacerations, and the importance of the early recognition and treatment of malignant disease as increasing the chance of permanent cure by operation; also the advisability of hysterectomy in operative cases where there is no prospect of permanent cure, and extols the value of palliative treatment in inoperable cases.

Medical Age, Detroit, Mich.

May 25.

103 A Philosophical, Anatomical and Physiological Study of Christian Science From a Physiologic Standpoint. Robert M. Wenley.
104 From an Anatomical Standpoint. J. Playfair McMurrich.
105 From a Psychological Standpoint. Walter B. Pillsbury.
106 Some Developments in the Therapy of Iodoform. J. J. Gaines.

American Practitioner and News, Louisville, Ky.

March 1.

107 The Origin of Some Diseases and a Consideration Thereof. M. K. Allen.

Medical Mirror, St. Louis.

May.

108 *Medical Education in the United States. Frank Billings.
109 Medical Inspection of Schools. Henrietta P. Johnson.
110 How Eye Strain Causes Headache. Lucien Howe.
111 Eschroatic Antiseptics vs. Alkaline, Saline Solution. H. Plympton.
112 A Case of Fall From a Height, Causing Various Injuries. Recovery. Frederick Griffith.

108.—See THE JOURNAL of May 9, p. 1271.

Southern Practitioner, Nashville, Tenn.

June.

113 Fractures of the Skull—With Report of Case. Paul F. Eve.

American Medical Compend, Toledo, Ohio.

June.

114 Pneumonia. W. A. Dickey.
115 Diagnosis of Kidney and Bladder Diseases, Especially with the Cystoscope. C. M. Harpster.
116 Further Observations in the Dosage of Antitoxin in Diphtheria. M. D. Rabenovich.
117 Two Cases of Epilepsy in Which Treatment with Chloretone Proved Beneficial. G. C. Bassett.

Canada Lancet, Toronto.

June.

118 Brain Power, How to Preserve It. James Grant.
119 Medical Reminiscences of Toronto. James H. Richardson.
120 A Case of Placenta Previa. K. C. McIlwraith.
121 Albuminuric Retinitis in Pregnancy. W. Gordon M. Byers.
122 The Uses and Limitations of the X-rays in the Treatment of Diseases. John McMaster.
123 When Is Colpoceliotomy Advisable? T. Shaw Webster.

Louisville Monthly Journal of Medicine and Surgery.

June.

124 Cesarean Section. J. Garland Sherrill.
125 Reflex Neuroses. William Cheatham.
126 Mental Defects of Children and Their Prevention. Perry Woolery.
127 Scrotal Hernia of the Bladder. John H. Rhodes.
128 Pyloric Stenosis. A. Morgan Cartledge.

Colorado Medical Journal, Denver.

February.

129 The Nervous Manifestations of Typhoid Fever, with Report of a Case. W. W. Reed.
130 The Colorado Law Controlling the Practice of Medicine. H. E. Peckham.

Woman's Medical Journal, Toledo, Ohio.

April.

131 Puerperal Sepsis. Olive Wilson.
132 Extra-uterine Pregnancy—Report of Two Cases. Emily Wright.
133 The Treatment of Constipation by Electricity. May Cushman Rice.
134 Dr. Margaret Taylor Shutt. Eliza H. Root.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

May 30.

1 *A Case of Trypanosomiasis. Patrick Manson and C. W. Daniels.
2 *On the Possibility of the Occurrence of Trypanosomiasis in India. W. B. Leishman.
3 Three Cases of Trypanosoma in Man in Entebbe, Uganda. C. J. Baker.
4 *The Use of Acid Phosphate of Sodium in Alkalinity of the Urine. Robert Hutchison.
5 *Clinical Observations on the Treatment of Inoperable Cancer by Formalin. A. F. Meredith Powell.
6 *Guaiacol in the Treatment of Smallpox. J. J. Ridge.
7 A Mercurial Injection for Use in the Intramuscular Treatment of Syphilis. F. J. Lambkin.

1. Trypanosomiasis.—In this case, fully reported by Manson and Daniels, the disease was contracted in the upper Congo region. In the treatment horse serum was used with some apparent effect in diminishing the parasites, but with the effect of producing great depression, high fever, convulsive movements of the limbs and erythema. It was discontinued in time, and the patient made a partial recovery from the disorder. The drug treatment seems to have been the use of arsenic in some form hypodermically and methylene blue, but without apparent results.

2. Trypanosomiasis in India.—Leishman offers a sort of retrospective diagnosis of certain cases that occurred in Dumdum, a village near Calcutta, where cases hitherto considered malarial were peculiar in their type. From his present knowledge of trypanosoma infection he thinks he may reasonably assume that that disease existed there at the time. He suggests further inquiry, with special reference to this fact.

4. Acid Phosphate of Sodium.—Hutchison finds that acid phosphate of sodium has a decided tendency to increase the acidity of the urine. It has been used frequently in the London Hospital in the last two years in cases of alkalinity from cystitis and other causes with very satisfactory results. It will render ammoniacal urine acid in a very large proportion of cases. It is very soluble in water and easily administered. It can be given in doses of from 30 to 60 gr. every three hours, but it is better to give it in smaller quantities oftener. A good plan is to dissolve 2 drams in a pint of water and allow the patient to drink from this from time to time.

5. Cancer Treated by Formalin.—Powell uses absorbent lint soaked in 2 per cent. formalin solution laid over the tumor and this covered with jaconet and cotton wool and bandaged on. The dressing should be changed every six hours. After three or four dressings the discharge and fetor cease and the further process is an aseptic one. In three to seven days the tumor loses its elasticity and becomes darkened, friable and insensitive. Further use of formalin is painless. A line of demarkation is formed and separation takes place, the time varying with the size and nature of the disease.

6. Guaiacol in Smallpox.—Ridge reports a number of cases of smallpox with favorable course in children, and attributes the good results to the use of guaiacol dissolved in olive oil, one part to 80. The whole surface was anointed with this with a swab of cotton wool at least every four hours. The patients were eager for it, as it allayed irritation, and after a few applications almost abolished it. It seemed to reduce temperature and prevent consequent delirium. It also seemed to check maturation and caused the pustules to dry up. The loathsome odor of eruption was almost entirely destroyed.

The Lancet, London.

May 30.

8 *The Results of Operations for Strangulated Hernia. Arthur E. Barker.
9 *Acholia. W. B. Cheadle.
10 *The Differentiation of the Continued and Remittent Fevers of the Tropics by the Blood Changes. Leonard Rogers.
11 *On Cases of Uncomplicated Myocarditis in Children. George Carpenter.

12 Malignant Disease of the Colon; Fourteen Colectomies with Ten Recoveries. H. Littlewood.
13 *On Peritomy for Diffuse Corneitis and Other Affections of the Cornea. Simeon Snell.
14 *The Therapeutic Value of Alternating Currents Applied to the Abdominal Sympathetic Nervous System. Samuel Sloan.
15 Successful Removal of More than Three-quarters of the Stomach for Cancer, with Gastro-jejunostomy. J. Lynn Thomas.
16 Xanthelasmoidea in an Adult. A. Christie Reid.

8. Strangulated Hernia.—Barker points out the dangers of neglect and of taxis and objects to leaving a strangulated hernia without a careful inspection of the bowel itself. He shows the percentage of operations for strangulated hernia performed at the University College Hospital for a number of years. The mortality has much decreased, from 53.1 per cent. to 22.2 per cent. Up to 1899 no case of successful enterectomy for the condition, either primary or secondary, is recorded, but since that period there have been three cases of artificial anus with two deaths and seven cases of primary enterectomy with four deaths. This he considers a decided improvement. All the patients would have died without the operations.

9. Acholia.—This is the term used to designate the condition of stools uncolored by bile. Cheadle gives the symptoms of those in which colorless stools without jaundice occurred temporarily, and finds them frequent in persons who live high. A change is produced by cholagogue purgation and restricted diet. He has seen this arise from time to time in chronic Bright's disease. In its more persistent form acholia is of serious import, and he points out the relations in tropical climates between it and the symptoms of sprue. In children the onset is usually abrupt, and offensive white stools are speedily followed by marked impairment of health. The children become feeble, pallid and languid and lose weight. This form is rarely met in adults in England, but he reports a case, undoubtedly of sprue, acquired in the tropics. He says that the functions of the liver are gravely interfered with, and possibly those of the pancreas also, seems certain from several considerations:

> 1. The stools are obviously greasy; in some instances you can see fat standing on the surface so thick that they glisten like talc, and on analysis are found to contain enormous excess of fat, from 24 to 63 per cent., the normal being 11 to 12 per cent., i. e., twice to more than five times as in the normal state. 2. The stools are acid, or slightly alkaline only, and are extremely offensive, presumably from decomposition of fats owing to the absence of bile, which is known to have antiseptic powers and arrests fermentation. 3. The stools are large in volume, out of proportion to the food taken, indicating imperfect digestion and absorption. 4. The patient wastes rapidly, and in protracted cases becomes greatly emaciated, white, flabby and anemic. 5. In all cases bile pigment is deficient and in extreme and typical cases, where the stools appear white, no trace of it can be found. Moreover, in the more marked cases analyzed by Dr. Wilcox, the bile acids were entirely absent also. In the case of sprue the results of different observers in this respect are contradictory. The effect of the administration of ox gall in producing green coloration of the stools points to the absence of this being the cause of absence of color. 6. Although the urine has only been fully examined in two cases, in one urea was largely deficient (only 0.45 per cent.) and in another in excess, and crystals of leucin were observed, this being indicative of imperfect liver function.

So far as he knows no definite lesion has been found postmortem. The liver is normal in appearance. The pancreas occasionally shows isolated patches of parenchymatous change, but these are not constant. The symptoms point to a cholegenetic arrest of the liver, not merely an abnormality of bile pigmentation. The cause is obscure, though its frequency during dentition favors the view put forward by Dr. Gibbons, that it has a nervous origin. It is possibly a dental irritation reflex. The only other possibly causal condition he has noted in connection with it is surface chill. The indications for treatment are to ease and assist the work of the liver, especially the digestion of fats and starches. If diarrhea is troublesome use bromids and opium and medicines which act as hepatic and blood stimulants together. The chlorids of arsenic and iron with perchlorid of mercury in small doses have appeared to do good. He has given brandy in doses of 10 to 60 drops, and chloral and bromid for the nervous system.

10. Fevers of the Tropics.—The general conclusions reached by Rogers from his careful clinical and pathologic study with modern blood tests of a large and consecutive series of cases of continued and remittent fevers in Calcutta hospitals, both in whites and natives, lead him to believe that only two forms exist, at any rate of long duration, namely typhoid fever and malarial remittent fever. These can be distinguished in a large proportion of cases by clinical methods, of which the temperature curve, pulse rate, presence or absence of abdominal symptoms and action of quinin are most important. For the remainder the serum test will suffice, except in rare cases. The leucocyte count is of special value because it is available when the parasites are absent on account of previous quinin treatment, and because it does not require a laboratory. Simple continued fever, if it exists, which is to be proven, is very rare as compared with malarial fevers. The so-called non-malarial remittent fever in natives has been shown by the serum test to be nothing but typhoid. Low fever is distinct clinically, but is probably the result of a debilitating influence of prolonged residence in a tropical climate, including latent malaria, and is not a new specific fever. Malta fever is at least exceedingly rare.

11. Myocarditis in Children.—Four cases are reported by Carpenter which he thinks offer no question as to the correctness of diagnosis. He calls attention to the presence of systolic and presystolic murmurs in these cases in which endocarditis was absent. It would appear that mitral murmur merely requires a leaking valve for its production, and that it is not diagnostic of mitral endocarditis. He thinks that the murmur heard in his cases, all but one of which came to autopsy, may explain the vanishing mitral murmurs which in cases of acite rheumatism and chorea have led to belief in recovery from endocarditis and functional cardiac disturbance.

13. Peritomy.—This operation, devised by Furnari in 1862, has been modified by Snell as follows:

> A speculum is inserted and the patient desired to look downward; a fold of the conjunctiva just beyond the cornea at the upper part is seized with forceps and snipped with curved scissors. From this point the conjunctiva is severed all round the cornea at a distance of from two to three millimeters. The portion left adhering to the cornea is next dissected up and removed with scissors. The division of the conjunctiva around the cornea is facilitated by using a pair of scissors having one blade somewhat longer than the other and ending in a bulbed extremity which readily runs underneath the conjunctiva. Recovery is usually quick from the operation, especially in young subjects. For a few days a rim of bare sclerotic is visible, but after the lapse of a very short time there is little indication of any operation having been performed.

He performs this operation in cases of double keratitis with very satisfactory results, and also in chronic ulceration of the cornea. He has performed it in 100 cases of diffuse corneitis, and finds it of practical value. If performed at the earliest stages in some instances it seemed almost to abort the disease, and in others it undoubtedly very materially shortened the long duration.

14. Alternating Currents to Sympathetic Nervous System.—Sloan describes the value of secondary faradism and the sinusoidal currents in numerous conditions, and the cases in which he thinks it is likely to be of benefit or fail are given by him as follows:

> 1. Those cases of uncomplicated neuro-muscular asthenia where the cause had ceased or had been removed have proved most amenable to the treatment. By neuro-muscular asthenia I mean neurasthenia minus its psychic elements. 2. Regarding cases of visceral neuroses almost as much can be said. 3. Cases of persistent sickness, some of them of reflex character, have done well under the treatment, the only failure in this list having been one in which the liver was considerably enlarged. 4. The treatment may be relied on in vasomotor cases, all of the five cases having been successful. 5. The treatment will be of little avail in neurasthenia. I suspect its only chance here would be after the Weir-Mitchell treatment of it had failed. 6. In cases where inflammatory mischief existed in the pelvic organs the result is not likely to be good. In such cases vaginal electric applications have given the best results. 7. Where septic endometritis exists only a very temporary improvement will follow, although this may be made a permanent one if the treatment is resorted to after curettage has removed the septic condition from the uterus. 8. Epileptics are likely to derive no benefit from the treatment. I had two cases of angina with no apparent evidence of organic disease. As the table shows, recovery ensued in one, but the treatment in the other appeared to have no influence, or rather seemed to make the symptoms worse. Perhaps in the successful case the success was due to the anterior electrode having been placed during part of the treatment over the cardiac region, and in the case of failure I suspect the dose given was too large. This patient had a somewhat alarming collapse during one of the applications.

The method of treatment was using two large moist clay electrodes, warmed. One about 9x6 inches is placed attached to the positive pole between the shoulder blades; the other attached to the negative pole, measuring 9x10 inches, over the abdomen, especially the epigastric region. The current is from a secondary coil of about 8,000 turns of fine wire, and the dose carefully measured by his faradimeter, which was described in the *Lancet* March 22, 1902. When the sinusoidal current is used the alternations are about 1,800 per minute, the voltage being much the same as that of the secondary coil. The dose at the first seance is from two to three milliamperes. As the case progresses this is raised until a dose of seven, or at most eight, milliamperes is administered. Each application is fifteen minutes long. With a larger number of turns than 8,000 a larger dose can be given, and with a smaller coil a smaller dose. The patient, at the early sittings especially, should be made to rest at least fifteen minutes before going home, and should then go to bed for an hour or longer, or recline on a sofa. The applications are given every second, third or fourth day; usually six or eight suffice. If more are required a gradual decreasing of the size of the coil should be used, and the former dose maintained. He gives his reasons at length for believing in the efficacy of the currents, and reports cases.

Indian Medical Gazette, Calcutta.

May.

17 Some Emergency Rations. C. A. Sprawson.
18 Unaccustomed Plenty and Prevalence of Bowel Complaints in the Bengal Jails. Norbin C. Dutt.
19 Note on the Mycoid Body Found in the Blood Corpuscles in Remittent Fevers. (To be continued.) W. Leonard Braddon.

Bulletin de l'Academie de Medecine, Paris.

20 (XLIX, 17.) Hommage à la cocaïne. L. G. Richelot.
21 (No. 18.) La notion de foie (liver) variable en séméiologie hépatique. Mongour.
22 *Means of Avoiding Inconveniences of Atropin. Darier.—Sels d'atropine: leurs indications en thérapeutique oculaire.
23 *De la nécessité et des moyens pratiques de controle des désinfections publiques. A. Calmette.
24 (No. 19, May 12.) Approval of Schedule for Unification of Formulæ of Heroic Drugs Proposed by the International Conference.
25 *Cas de tétanos consécutif à une injection de sérum gélatiné. G. Dieulafoy.

22. To Avoid Inconveniences of Atropin.—Darier announces that methyl atropin in the form of a 1 per cent. solution of the hydrobromate, induces in emmetropic eyes a dilation of the pupil maximal in thirty to forty-five minutes. It diminishes in twelve hours and vanishes during the second day. Its disappearance can be accelerated by instillation of an eserin collyrium. He prefers to use it in the formula of .05 gm. methyl atropin hydrobromate with .1 gm. of cocain hydrochlorate in 10 gm. distilled water. One drop induces the maximal dilation in thirty-five to fifty minutes, with brief paresis of accommodation, not noticeable in myopia and emmetropia. The methyl atropin is free from the drawbacks of atropin, and is especially indicated for the diagnosis of incipient iritis when glaucoma is feared, also for the accurate determination of the static refraction, and for all cases in which dilation of the pupil is required for ophthalmoscopic examination.

23. Tests for Public Disinfections.—Calmette uses for a control test when sulphurous acid is the disinfectant employed, glass tubes 5 to 10 mm. in diameter and 1 meter in length. They are filled with fine sand stained blue with tincture of litmus. These tubes are plugged with cotton and placed horizontally at different points in the room. As the gas that is generated enters the tube it turns red the blue sand with which it comes in contact, He has compiled a table showing the depth to which the gas must penetrate in order to have the disinfection complete in regard to germs in the room. At a depth of 25 cm. the typhoid germs are destroyed, but diphtheria bacilli require a red zone of 40 cm. before their destruction is accomplished. Another test is with short glass tubes, 10 mm. in diameter and 10 cm. long, open at both ends, except for being plugged with cotton. Pure cultures of the germs to be tested are transferred to a strip of filtering paper, which is then placed in the tube. Thus prepared the tubes are exposed at different points in the room. Each strip is then immersed in nutrient bouillon. Tubes only 6 cm. long are used when formol is employed, as it has less penetrating power. It is tested by means of wafers made by adding a hydro-alcoholic solution of fuchsin rubin to horse serum, and desiccating. The red wafers thus formed by the dried serum dissolve readily in water, to which they give up their coloring matter. Exposed to the action of formol they become insoluble and retain their stain in water. A few of these wafers or scraps of paper soaked in the serum and dried are placed at 5 cm. intervals in the long glass tubes mentioned above, with sand or cotton between. As they are transferred in turn to water after the disinfection, the solubility is an accurate index of the penetration of the fumes of the formol. He has had a small room constructed for the sole purpose of testing the results of public disinfection by these tests.

25. Tetanus After Injection of Gelatin.—Dieulafoy adds 5 to the 18 recently collected by Chauffard, and says this brings up to 23 the total number of cases of tetanus known to have occurred during the last two years after therapeutic injection of gelatin. Hayem has been using for twenty years intravenous injections of saline solution and found them a most effectual means of hemostasis. In severe cases he injects from one-half to one liter. Roux affirms that solutions of gelatin can be rendered absolutely sterile by heating to 110 C. according to the standard methods.

Bulletin Gen. de Therapeutique, Paris.

Last indexed page 878.

26 (LXXII, 8.) *De la tachycardie continue apyrétique du début de la tuberculose aigue. F. Vialard.
27 (No. 9.) *Traitement de l'ictère simple. A. Robin.
28 *Traitement preventif et curatif de la tuberculose pulmonaire. J. Tetau.
29 (No. 10.) Sulphur Scottish Douches in Treatment of Pulmonary Tuberculosis. Berther (Amelie des Bains).—De la douche écossaise sulfureuse dans le traitement de la tub. pulm.
30 *Moyen pour éviter la confusion des médicaments. E. Berger and R. Loewy.
31 *Traitement de la tuberculose par l'emploi combiné de la tuberculine et les sels éthérés de créosote. S. Bernheim and Quentin.
32 *Traitement de la glossite exfoliatrice marginée par la liqueur de Van Swieten employée en bain local. P. Gallois.
33 (Nos. 11-12.) Injections sous-cutanées de paraffin. C. Amat.
34 L'hagiothérapie. Les saints médecins (miracle healing). Cabanès.
35 (No. 13.) Inhaler in Form of Smoking Pipe. Rochon.—Inhalateur.
36 Small Apparatus to Excite Pupil to Facilitate Determination of Pupil Reflex. M. Dupont.—Petit appareil excitateur de la pupille pour la recherche du réflexe lumineux.
37 *Obesity with Partial Localization at Heart. Flessinger.—L'obésité avec surcharge graisseuse du coeur.

26. Tachycardia in Incipient Acute Tuberculosis.—Vialard is convinced that the circulation centers are first affected by the tuberculosis toxin, and that the continuous apyretic tachycardia observed in the incipiency of acute tuberculosis is due to this cause. There is no modification of rhythm and no abnormal murmur. Digitalis is useless and even dangerous.

27. Treatment of Simple Icterus.—Robin advises a milk diet until the Gmelin test shows the absence of bile pigments and their substitution by urobilin or hemaphein, which is a sure sign that the biliary passages are permeable. The diet should then be regulated to stimulate the liver, with alkalines and belladonna. He gives 2 to 3 cg. of the latter daily, supplemented by flushing the intestines twice a day with 1.5 liters of water, at the temperature of the room, as an excito-motor stimulant for the biliary passages and secretions and for the intestines. After the milk has been discontinued he has 5 gm. sodium bicarbonate dissolved in a liter of hot water and 150 gm. taken in the morning and again half an hour later. The same amounts are to be taken again at 4 p. m. Hauterive Vichy can be substituted, if desired. He combats the constipation with salines in laxative doses, preferably sodium sulphate, 10 to 12 gm. in a little seltzer water on empty stomach.

28. Preventive and Curative Treatment of Tuberculosis.—Tetau regards the temperature as the sign of the predisposition to tuberculosis. Every one whose average temperature is above 37 C. (98.6 F.) is a candidate for the disease, as it shows peculiarly active organic interchanges. The physician should aim to reduce these excessive oxidations and transform the predisposed into the arthritic condition, thus presenting the greatest possible resistance to the invasion. The temperature can be brought down below this danger point by means of repose, forced feeding, bromids of sodium and of camphor and arsenic, combating at the same time, with calcium glycerophosphate, the demineralization which accompanies this condition. The results in his practice of the application of these principles have been very promising.

30. **Danger Labels for Drugs.**—Berger and Loewy suggest utilizing for the labels on medicine bottles the colors used in railroad signaling, with whose meaning nearly every one is familiar. White signifies that the track is clear, that the patient can take the medicine himself. Green calls for caution, a medicine to be given only to intelligent patients or used by nurses, while red signifies danger, poison, and the contents of the bottle to be used exclusively by the physician.

31. **Associated Tuberculin and Creosote Method of Treating Tuberculosis.**—Maréchal of Brussels is the author of this mode of treating tuberculosis, but Bernheim does not give quite such large doses as Maréchal. He prefers to inject 1, then 2, and then 3 c.c. of creosote phosphate on three consecutive days, the fourth day substituting an injection of .0025 gm. of tuberculin, then repeating the course, gradually increasing the dose of tuberculin. Each c.c. of the Maréchal tuberculin used contains 1 milligram of the active products. The results have been more satisfactory in the writers' experience than with any other method.

32. **Local Treatment of Exfoliating Glossitis.**—A spoonful of Van Swieten's solution is taken in the mouth and the head moved around until the tongue is thoroughly bathed in the fluid, which is then ejected. Gallois had his patients do this every day, and they were cured in a week.

37. **Obesity with Heart Involvement.**—Fiessinger has found that many apparently very severe cases rapidly recover normal tone on a milk diet. He describes 7 cases in detail. The liver was enormous in all and the obesity had been favored by alcoholism and over-eating. The oxidative processes should be promoted and the dietary restricted and milk fulfills both these conditions. In less severe cases he allows a meat diet with restriction of fluids, but when the heart is much dilated, with signs of renal toxemia and of arterial hypertension, the milk diet is preferable. One of his patients found that the symptoms of diabetes vanished with the obesity. One required injections of caffein and another digitalis. All lost 20 to 80 pounds on the milk.

Revue Mens. des Maladies de l'Enfance, Paris.

Last indexed page 946.

38 (XXI, 4.) *Ponction lombaire dans les infections broncho-pulmonaires des enfants. P. Nobécourt and R. Voisin.
39 Cas de meningite séreuse à streptocoques chez un nourrisson (in a nursling). Delherm.
40 Cas de spina bifida; opération; mort. C. G. Cumston (Boston).
41 (No. 5.) *Indications générales du traitement dans le pied bot varus-equinus congénital. A. Broca.
42 *Importance of Enlargement of Spleen as Sign of Early Hereditary Syphilis. A. B. Marfan.—De l'hypertrophie chronique de la rate dans la syphilis héréd. précoce et de *sa haute valeur pour le diagnostic de cette maladie.*
43 *Injection d'air dans le tissu cellulaire présacré comme moyen de traitement de l'incontinence nocturne ou diurne. *Bérard (Lyons).*

38. **Lumbar Puncture in Broncho-Pulmonary Infections.**—Nobécourt examined the cerebrospinal fluid in 31 cases of these infections in children. There were no meningeal phenomena in 7, but the others exhibited symptoms indicating the involvement of the meninges, from mere stiffness of the neck to general convulsions. In the 7 negative cases the fluid was clear and generally sterile. Only 4 survived out of the 24 with meningeal symptoms, and in 2 of these no leucocytes had been found in the fluid. In the third there were a few lymphocytes and polynuclears, and in the fourth the former alone. More or less edematous congestion is the rule, but in a few instances an actual sero-purulent meningitis was revealed. The puncture findings bear no relation to the gravity of the disease, although they indicate the intensity of the local reaction. In some of the milder clinical cases there was a distinct leucocyte reaction, and in other very severe ones, merely hypertension.

41. **Treatment of Congenital Varus-Equinus.**—This address was delivered at the Madrid International Congress by request. Broca proclaims that treatment should commence the day the child is first seen, even if just born. The dangers of chloroform are no greater at 6 weeks than at 4 or 5 years. The immobilizing plaster cast need not be wet if the child is taken up to urinate several times during the night and the cast is wrapped in non-absorbent cotton. The modeling exercises should be continued every day or three times a week, and by the fifteenth day or end of the month the varus and supination will be sufficiently corrected for the equinus to be attacked. It may be necessary to cut the Achilles tendon. Open tenotomy is preferable, cutting the ligamentous fibers of the soleus in front of the tendon under chloroform preceded by a brief modeling. He applies a flannel bandage after two or three weeks of the plaster cast, with daily modeling. When the child commences to walk a case of adhesive plaster will be found useful. When the foot is in proper position, walking on it will complete the cure. A well corrected foot should be flat, with no arch on the inner side. The mother should aim to secure this as the child stands barefoot, leaning on a chair, and correct the tendency to toe in. The shoe should lace and fit well, the sole on the outer side raised a full centimeter. By eighteen to twenty months the result will be perfect. In older children he commences with resection of the heads of the astragalus and calcaneum. This alone will often correct the deformity. Ten years of experience have demonstrated that the fear of arresting the growth of the bones is unfounded. He sometimes performs this operation on younger children if the foot is not in good position after the above treatment. It is not at all a serious intervention, and the result is rapidly complete. The foot afterward is over-corrected in a plaster cast. Massage and exercises of the foot are undertaken as soon as possible. This method of treatment ranging from simple manipulations to resection of the tarsus should be tentatively applied to the individual case. The pure orthopedists do not approve of it nor the ultra-surgical interventionists, but it is best adapted to the variable exigencies of the clinic.

42. **Hypertrophy of Spleen Early Sign of Hereditary Syphilis.**—Marfan announces that in 40 cases of chronically enlarged spleen in children syphilis was unmistakable in 31 or 77.5 per cent. Only 9 were free from the taint of hereditary syphilis. In 4 with the syndrome of pseudo-leukemic anemia, all were rachitic, and in 2 the rachitis was associated with syphilis. In the others without evident anemia, syphilis was marked in 19 and associated with rachitis in 10. In 4 there were signs of rachitis alone, and in 1 the splenomegaly was due to tuberculosis, and in 2 to some other unknown cause. These figures suggest the possibility of the existence of a syphilitic rachitis. In any event, in presence of a case of rachitis without appreciable signs of syphilis, we should consider the possibility of the latter. Even in very severe cases of hereditary syphilis of this splenomegalic type the patient may recover under prompt mercurial treatment, though the stage of pseudo-leukemic anemia may have been reached. He has examined 376 children under 2 years of age, and found among those with spleen of normal size, that 59 had rachitis, no syphilis; 23 syphilis, no rachitis, and 8 rachitis plus syphilis, while 40 with splenomegaly included, as mentioned above, 12 with rachitis plus syphilis; 6 with rachitis, no signs of syphilis; and 19 with syphilis alone. The splenomegaly may be accompanied by a certain amount of enlargement of liver and glands. The coexistence of splenomegaly and rachitis does not, therefore, exclude syphilis but rather render it more probable, as in 66 per cent. syphilis was certain or probable. The same is true of splenic pseudo-leukemic anemia for 50 per cent.

43. **Injection of Air as Cure for Urinary Incontinence.**—Jaboulay met with a case of urinary incontinence in a girl of 18 rebellious to the bromids, to section of the meatus and antisepsis of region, also to epidural injections of artificial serum. He then sought to act on the sacral and hypogastric plexuses by compression. He accomplished this and effectually cured the incontinence of many years' standing by injection of air through the raphe in front of the sacrum into the perirectal space. About 150 c.c. of the air were injected and the immediate result was distention of the parts and colic. The air made its way into the supraclavicular fossa and caused some cardiopulmonary disturbance for a few minutes. In a quarter of an hour all the discomfort had subsided, and during the month since the patient has been freed from her incontinence. In future he will use artificial serum instead of air for the injections as more liable to remain localized than the latter.

Revue de Therapeutique, Paris.

Last indexed page 947.

44 (LXX. 6) *Oil and Contraindication to Operation in Appendicitis A. de Vevey.—Traitement médical de l'appendicite par les larges irrigations huileuses Une contre-indication formelle à l'opération.
45 (No 7.) La Photothérapie F. de Commelles 167 observations. Lupus
46 Hydrologie médicale et scientifique en 1903 Garrigou
47 *Calomel and Salt Poisoning J Régnault—Calomel et sel marin
48 (No 8) Treatment of Tuberculous Joint Affections in Children A Hoffa (Berlin).—Traitement des tuberculoses articulaires de l'enfance Address at Madrid Congress.
49 2 nouveaux cas de scorbut infantile. J. Comby.

44. Oil Treatment of Appendicitis and Contraindication to Operating.—Vevey recalls that the syndrome of appendicitis was known in detail as early as 1830, but was called then 'typhlo-perityphlitis.' The more strenuous life of the present day, the sports, jars in transportation, etc, are possibly factors in its increased frequency, but this is mainly due to neglect of the old-fashioned habit of occasional purges. Arthritic subjects do not suppurate easily and analysis of the cases shows that they are unusually resistant, consequently medical treatment alone is indicated in their case. Appendicitis frequently develops on a tuberculous soil, but even the suspicion of tuberculosis is a formal contraindication to surgical intervention, under penalty of whipping up the tuberculosis to a speedily fatal termination He contends that the best mode of treatment is to administer 5 to 6 spoonfuls of olive oil during the day, with repose, supplemented by injections of the oil, 250 gm at a time, repeated as often as necessary to relieve the acute crises. The patient should take the injection in a position to favor the copious and thorough rinsing of the intestines with the oil The abdomen is bandaged with flannel impregnated with oil containing 10 per cent guaiacol and 5 per cent. iodoform. Chills and signs of peritoneal inflammation alone indicate surgical intervention and tuberculosis is a *noli me tangere* under all conditions

47. Calomel and Salt.—After taking calomel two young men ate a couple of copiously salted eggs. One exhibited dyspnea, small rapid pulse, clamminess, nausea and violent convulsions. The other had colics and diarrhea for three days, the discharges containing blood and mucus.

Archiv f. d. ges. Physiologie (Pflueger's), Bonn.

Last indexed page 1615

50 (XCIV, 1-2) Friedrich Goltz J R Ewald
51 Die Physiologie und Morphologie der Schwimmblase (swimming bladder) der Fische A Jaeger
52 (No. 3-4.) *Physiology of the Sense of Space E v. Cyon.—Zur Physiologie des Raumsinnes III Tauschungen in der Wahrnehmung der Richtungen durch das Ohrlabyrinth.
53 Equilibrium in Hovering W Oswald—Zur Theorie der Schwebevorgange, sowie der specif. Gewichtsbestimmungen schwebender Micro-organismen
54 (No 5 6) Purin in Urine R Burian and H Schur.—Das quantitative Verhalten der menschlichen Harnpurinausscheidung
55 *Absorption in Intestines R Haber—Ueber Resorption im Darm IV.
56 (No 7 8) Influencing of Subjective Visual Impressions V Urbantschich—Ueber die Beeinflussung subj. Gesichtsempfindungen Twelve colored plates
58 Zur Physiologie des Ohr Labyrinths G v Marikovszky (Budapest).
59 (No 9 10) *Research on Action of Camphor H. Winterberg (Vienna)—Experimentelle Untersuchungen uber die Wirkung des Camphers auf das Herz und die Gefasse von Saugethieren
60 Ueber die Fortpflanzungsgeschwindigkeit (rapidity of propagation) des Elektro-Tonus M. Gildemeister and O. Weiss (Konigsberg)
61 (No 11 12) Alteration in Perception of White Independent of Color Sensitiveness E Hering (Leipsic).—Ueber die von der Farbenempfindlichkeit unabhängige Aenderung der Weissempfindung
62 Secondary Contractions of Diaphragm O. Langendorff (Rostock)—Notiz der sec. Zwerchfellzuckungen betreffend
63 *Influence of Alcohol on Albumin Metabolism R. Rosemann (Greifswald)—Einfluss des Alkohols auf dem Eiweissstoffwechsel
64 *Meat Diet and Its Relation to Gout. M Kochmann.—Ueber Fleischnahrung und ihre Beziehung zur Gicht.
65 *Muscles During Deprivation of Oxygen C L v Lhota—Ueber die Functions-Aenderung des Warmblutermuskels beim Sauerstoffmangel.

52. Physiology of Sense of Space.—This article is the conclusion of thirty years of brain-racking study of the sense of space, von Cyon remarks. He believes that he has established that the semicircular canals are the peripheral organs of the sense of space, as he proclaimed long ago, and further study has only confirmed the truth of this assumption. Each of the canals corresponds to one of the three dimensions of space, and the limitations of the organ restrict us to these three. His latest work has been the study of the deceptive orientation on change of position in the dark or after whirling around. The results harmonize at every point with his preconceived conception of the functions of the labyrinth, as he describes in detail.

55. Intestinal Absorption.—The soluble lipoid combinations are absorbed into the epithelium, while the absorption of the insoluble is interepithelial with one exception, the salts of iron. Iron seems to have a special arrangement for its absorption in the intestines not shared by any other of the heavy metals.

59. Action of Camphor on Circulatory System.—Winterberg tabulates the results of administration of camphor to 100 rabbits, cats and dogs, as manifested on heart and vessels. Nothing was observed in a single instance which indicated that the heart action was modified by the camphor either favorably or unfavorably. The blood pressure in auricle and arteries showed no marked divergence from normal. The cause for the lessened arterial pressure after administration of camphor is evidently due to the dilation of the smaller arteries. This dilation is not general; the vessels in the splanchnic region seemed to be exempt, which offers a suggestion for therapeutics. The action of the camphor on the vascular center was not constant.

63. Influence of Alcohol on Albumin Metabolism.—Rosemann proclaims that the contradictory views in regard to alcohol are due to the fact that it can be utilized by the organism the same as carbohydrates and fats, and it can exert the same albumin-saving action. But under certain circumstances it displays an albumin-destroying faculty which counteracts its albumin-saving action. Among the circumstances which induce this are the lack of being accustomed to alcohol and the lack of an adequate amount of calories in the dietary. This influence is usually temporary, and the albumin-saving faculty soon gains the upper hand and continues unhindered.

64. Meat Diet and Its Relation to Gout.—Kochmann fed three dogs exclusively on meat and examined the metabolism. The urine was extremely rich in urea. The bowels moved very seldom, the fifth day on an average. The liver and kidneys were found very much degenerated, indications of acute or subacute nephritis, cloudy swelling of the liver and pigment deposits in the spleen. The control animals were all normal. Applying the results to man it is evident that the injury to liver and kidney on a copious meat diet prevents the normal destruction of uric acid, which in health occurs in the liver, kidneys and muscles. If the liver and kidneys are degenerated and the *muscles* suffering from lack of physical exercise, the uric acid must accumulate and be deposited at different points in the body. Alcohol is an accessory factor, as it aids in the degeneration of the liver.

65. Muscles During Asphyxia.—Lhota found that the functional capacity of the muscles in his experiments was reduced, sometimes to zero, by the lack of oxygen. As soon as the oxygen was supplied they regained their former integrity. On the other hand, the muscles of weak, emaciated animals and of those submitted to repeated asphyxia, suffered little, if any, impairment of their functional capacity.

Deutsche Zeitschrift f. Chirurgie, Berlin.

Last indexed page 880.

66 (LXVI, 5 6) Beitrag zur Talma'schen Operation. O. Hildebrand (Basle). One case. Successful.
67 Zur [illegible]
68 Zur [illegible] inst [illegible] der Arthritis deformans, J. Elter.
69 Ankylosis mandibulæ vera. L W. Orlow.
70 Zur Anatomie des Plexus chorioideus. Ziegler.
71 Unusual Sequelæ to Basal Fracture Borchard.—Ueber einige seltenere Folgezustande nach Schadelbasisfractur.
72 Two Cases of Congenital Sacrococcygeal Tumors W. Hoppe—Zur Lehre von den angeborenen Kreuzsteissbeingeschwülsten.
73 Bone and Cartilage Growths in Tonsils H. Nosske—Ueber Knorpelund Knochenbildung in den Tonsillen
74 Luxatio supra pubica Borchard
75 Technic and Instruments Used in Plugging Bone Cavities M. Silbermark (Mosetig-Moorhof's clinic, Vienna).—Zur Technik bei der Plombirung von Knochenhohlen mittels Iodoformknochenplombe. Six cuts. See abstract page 1544, No. 75.

76 Fall von doppelseitiger Luxatio tibiæ anterior compl. F. Fischer.

77 (LXVII, Esmarch Festschrift). *History of Neuroses of Joints. König.—Zur Geschichte der Gelenkneurosen.

78 Prognosis of Wounds in Battle. Hildebrandt.—Die Prognose der Schussverletzungen im Felde.

79 *Spinal Anesthetization of Animals. Eden.—Thierversuche über Rückenmarkenasthesie.

80 *History of Benevolent Institutions. A. Köhler (Berlin).—Zur Geschichte der socialen [illegible]

81 *Acute Hernias in Abdominal W[illegible] —Ueber acute Darmwandbr[illegible] vorderen Bauchwand mit Ausgang in Gangrän.

82 *Results of Operative Treatment of Congenital Cleft Palate. O. Kappeler (Constance).—Ueber die op. und funct. Erfolge der Operation der *angeb. Gaumenspalte.*

83 Zur Achillodynia syphilitica. G. Schirren. One case.

84 *Operative Treatment of Sciatica. Bardenheuer (Cologne).—Ischias, ihre Behandlung mittels der Nevrinsarkoklesis.

85 *Should We Operate in Tubercular Peritonitis? E. Pagenstecher.—Dürfen wir die Bauchfelltuberkulose operiren?

86 *Ueber Ganglien-Neurome und andere Geschwülste des peripheren Nervensystems. L. Riedel and R. Beneke.

87 *Ueber einen Echinococcus des Stirnhirns (frontal lobe) von aussergew. Grosse, nebst Bemerkungen über die Operation des Hirnechinococcus. F. Franke.

88 *Fibroma of Neck in Relation to Spinal Cord. E. Boerner.—Ueber Fibrome des Halses mit Beziehungen zum Rückenmark.

89 Significance of Acquired Diverticulum in Intestine. C. Georgi.—Ueber das erworbene Darmdivertikel und seine praktische Bedeutung.

90 Fall von Tetanie gastrischen Ursprungs im Anschluss an Trauma. P. Gatzky.

91 *Chat on Appendicitis. F. Lange (New York).—Eine Plauderei über App.

92 Importance of Certain Muscles for Flat Foot. C. Nicoladoni.—Ueber die Bedeutung des Musculus tibialis posticus und der Sohlen-Muskeln für den Plattfuss.

93 *Treatment of Wandering Kidney. E. Hahn (Berlin).—Ueber Wanderniere und die Behandlung derselben.

94 Zur chirurgischen Syphilis. F. Dittrich.

95 *Diphtheria of Intestines After Serious Operations on Feeble Patients. Riedel.—Ueber Darmdiphth. nach schweren *Operationen bei sehr geschwächten Kranken.*

96 *Bullet Healed in Heart and Experimental Research on Foreign Bodies in Heart. O. Riethus.—Fall von Schussverletzung des Herzens und Einheilung des Projectils, nebst exp. *Untersuchungen über Fremdkörper im Herzen.*

97 Signs of Suppurative and Gangrenous Epityphlitis. E. Küster.—Die klin. Zeichen der eiterigen und brandigen Formen der Ep.

98 Spiral Fracture of Leg Bones. C. Lauenstein (Hamburg).—Zur Spiralfractur des Unterschenkels nebst Beschreibung einer typischen Form des Spiralbruches beider Knochen. Thirty-two cases. Twenty-eight cuts.

99 Ueber die Luxation des Os lunatum carpi. L. v. Lesser.

100 Zur operativen Behandlung des Carcinoma ventriculi. Caspersohn (Altona).

101 Experimentelle und klinische Beiträge zur Ether-Narkose und zur Ether-Chloroform-Misch-Narkose. Poppert (Giessen).

102 Leichte und schwere Neurosen. Schüssler (Bremen).

103 Zur Technik der Radicaloperation der chronischen Otitis media purulenta. P. Reichel.

104 Surgery of Liver. Zur Leberchirurgie; 4 Leberabscesse. O. Hildebrand (Basle).

105 *Removal of Foreign Bodies from Bronchus and Tamponing the Bronchi. Helferich (Kiel).—Ueber die Entfernung von Fremdkörpern aus den Bronchien und über Bronchustamponade.

106 Congenital Elevation of Scapula. P. Sick.—Ueber angeborener Schulterblatthochstand.

107 Stenosis After Incarceration of Hernia. R. Göbell.—Ueber die Darmstenose *nach Brucheinklemmung.*

108 *Ueber extracranielle Aneurysmen der Carotis interna. J. Werner.

109 Behavior of Bones with Glancing Bullets. Oertel (Kiel).—*Verhalten der Knochen bei Streifschüssen aus modernen Kriegswaffen.*

110 Zum Mechanismus der Luxation im unteren Radioulnargelenk. E. W. Baum.

111 Local Pressure on Frontal Brain and Pathology of Brain in General. P. L. Friedrich (Leipsic).—Zur Hirnpathologie, insbes. zur Pathologie des Stirnhirns, zugleich ein Beitrag zur Frage nach der Bedeutung der örtlichen Hirndrucks. Four cases.

77. **Joint Neuroses.**—König comments on the fact that radioscopy has revealed that many painful joint affections formerly classed as neuroses are in reality due to some anomaly easily remedied by operative intervention. He describes 5 such cases and mentions parenthetically that he recently removed 52 "joint mice," the size of a pea to that of a bean, from a single elbow, leaving the joint intact. He also refers to osteochondritis dissecans as a frequent source of the neuralgic pains diagnosed as neurosis. If the meniscus is involved alone even radioscopy will not reveal the source of the trouble.

79. **Spinal Anesthetization of Animals.**—Experiments on 110 cats are described in detail as conducted at Bier's clinic at Greifswald. The substances injected by the technic of spinal cocainization included morphin, nirvanin, carbolic acid, peronin, acoin, *holocain*, anesthesin, beta eucain, tropacocain, ether, alcohol and chloroform, the two latter both negative, and saline solution and distilled water. Paralysis followed the use of a number of the substances, but the fact was established that saline solution and distilled water were both capable of inducing complete anesthesia to the breast line, allowing amputation of legs and tail, with no after effects, the animals apparently normal afterward. From one to ten syringefuls of *the distilled* water were injected. One cat injected with 2.5 syringefuls had complete anesthesia to the breast for thirty minutes; another with 3 syringes had the same in twenty minutes, subsiding to the pelvis by the thirtieth minute and to the legs and buttocks by the fortieth. Afterward the animal ran around normally. In another cat, 10 syringes induced complete anesthesia to the costal arch immediately, the respiration unaffected, continuing for twenty minutes, with afterward normal liveliness. In another, 1 syringe of normal saline solution induced good anesthesia to the breast in twenty minutes. In a black cat weighing 3 pounds, 1 syringe of a .2 per cent. saline solution induced faultless anesthesia to the tenth dorsal vertebra in one to two minutes, lasting for an hour and a quarter. After injection of 3 syringes in another animal the leg and tail were amputated without resistance.

80. **Benevolent Institutions in History.**—Köhler cites in this historical sketch that Scipio founded a city to shelter his veteran warriors and several towns were devoted to the veterans of the Roman army. As early as 1644 sick benefit *societies and old age pensions had been inaugurated among the* miners of Saxony.

81. **Hernia into Abdominal Wall.**—Wiesinger reports 2 cases in previously healthy children, both entailing gangrene, with the death of one child. The hernia was too small and deep to be discoverable and attention was attracted only by symptoms of peritoneal irritation. As the gangrene developed, the peritonitis deceptively subsided and the children were apparently well for eight to ten days. Then pain and slight fever followed as inflammation and suppuration developed. The exudate worked its way between the layers of the wall and manifested itself at the umbilicus. The suppuration and fluctuation in and around the umbilicus serve to differentiate this lesion. In a third case a child of 5 succumbed to the effects of acute gangrenous hernia of the wall of the stomach. The lesion in this case had been treated for nine weeks on the diagnosis of tuberculous peritonitis.

82. **Cleft Palate.**—Kappeler has followed 82 patients operated on and finds that 61 were cured, including 29 who required more than the single intervention. It failed completely in 4, and 7 are still under treatment. The speech was normal at once in 4; after training in 11; after training and use of an obturator in 23; very much improved in 10; *no effect* in 11; still under treatment or result unknown, 12. He gives details of technic and casuistics.

84. **Operative Treatment of Neuralgia.**—Bardenheuer insists that the cause of sciatica or other neuralgia is in many cases the length and narrowness of the bony passage through which the nerve emerges. When this passage is small, slight traumatisms may induce concussion of the bone at this point and irritate the vasodilating nerves and the walls of the accompanying vessels. The result is an overfilling of the vessels, venous stasis, with consequent compression of the adjacent nerve and pain. In 5 cases of sciatica in which he operated he found the veins accompanying the nerve darkly congested. He proceeded to enlarge the bony canal, cutting away the lower section of the sacro-iliac synchrondrosis, and thus allowing the nerve to rest on the soft parts. There has been no recurrence of the neuralgia during the two years since in any instance. Trauma was noted in the etiology of all these cases and in that of 16 other cases of sciatica he has since encountered. He operated on a sixth patient, a diabetic, who has since died in coma, and on 2 others. In one he removed a myxosarcoma, the size of a goose egg, on the first sacral nerve. The sciatica was the only sign of its presence and the operation undertaken on this account revealed the neoplasm and allowed its removal in an early stage. In his eighth patient the neuralgia was in the

second branch of the trigeminus, and on opening up its bony passage there evidences of pronounced venous stasis were discovered. The nerve was allowed to rest on soft parts alone by excision of bone, and the neuralgia was banished. The patient died not long after from perforation of a duodenal ulcer. The operation showed that the nerve was apparently intact, and confirmed the assumption that the pain would cease when more favorable conditions for circulation were provided. The measure should at least be tried before attempting excising the nerve or a ganglion in such cases.

85. **Operative Treatment of Tuberculous Peritonitis.**—Pagenstecher's experience includes 9 cases. He advises intervention in the chronic stage—moderate fever is not a contraindication—especially in the cases in which the tubes are the primary seat of the infection. Their removal appears to have a favorable influence on the course of the disease. He prefers expectant treatment in the encapsulated form, in the first stormy onset of the form suggesting ileus, and in the dry variety. His cases are described, with particulars.

86. **Ganglion-Neuromata.**—A careful study is given of the case of a child of 5 on whom 160 tumors could be counted, all due to blastomatous proliferation of the ganglion cells. In 1897 he operated on a boy of 4 who had an immense retroperitoneal tumor. About 700 gm. of the tumor were resected, but a large part extending up under the ribs to the diaphragm was left. The paralytic phenomena caused by the compression of the tumor at the fourth and fifth lumbar segments gradually subsided, and when examined five years later no trace could be detected of the remnants of the tumor, or signs of one elsewhere. In another case he extirpated a tumor in the sciatic nerve requiring excision of half the thickness of the nerve for an extent of 12 cm. There has been no recurrence of the tumor formation during the thirteen years to date, and no paralysis nor sensory disturbances, but the entire leg is much thinner than the other. In a fourth case he removed a congenital tumor on the forearm from a nursling. Both the median and ulnar nerves were resected for several centimeters, and four months later he performed a plastic operation with almost complete restoration of function.

87. **Echinococcus of Frontal Brain.**—His experience with a case in which the patient succumbed immediately after removal of a very large hydatid cyst in the frontal lobe, has convinced Franke that puncture and injection of saline solution is the better mode of treatment for such cases.

88. **Spinal Symptoms from Tumor in Neck.**—The spinal symptoms began to subside at once after removal of the fibroma and completely vanished in time, although they had lasted for a year before the intervention. The case shows that even the most benign tumor in the neck may give rise to serious spinal disturbances.

91. **A Chat on Appendicitis.**—Lange refers to the fact that Esmarch suffered from a severe attack of recurring appendicitis on his visit to America fourteen years ago. His hale and hearty condition on his eightieth birthday, the occasion of the "Festschrift," speaks in favor of the non-operative treatment followed.

93. **Treatment of Wandering Kidney.**—Hahn describes the technic which he has been using for eighteen years. He lifts up the adipose capsule until the kidney rolls into its proper position, and then cuts a flap in the capsula propria, exposing the greater part of the posterior surface of the organ. The slit adipose capsule is sutured to the fascia and muscles, the flap of the capsula propria to the skin and cellular tissue below. He mentions that about 900 cases of nephropexy have been published. All discomfort has been abolished by the procedure in 2 to 60 per cent., according to the reports given by various operators.

95. **Post-Operative Intestinal Diphtheria.**—Riedel reports 5 cases of fatal necrosis of the intestinal mucosa subsequent to a laparotomy. No mercury had been given in any instance, but all the patients were in an exceptionally debilitated condition. He has since become more cautious in regard to purging patients as a preparation for or in the after-treatment of an operation. He thinks that a little costiveness is preferable to the danger of such a serious complication as post-operative diphtheria of the intestines.

96. **Bullet Healed in Heart.**—After the first shock of the bullet wound directly in the sternum had subsided, the patient, a robust young man, was comparatively comfortable for three weeks, during which the bullet had probably been ensconced in the wall of the heart. At this date it penetrated into the heart, and the most violent arrhythmia followed for a time. Radioscopy showed the bullet in the heart, tossed about in the blood stream. By the end of six months the bullet had become stationary, and there was scarcely a trace of arrhythmia. Experiments on dogs confirmed the assumption that the prognosis is not affected when the foreign body heals in the heart without trace of reaction. None of the dogs succumbed, although foreign bodies of various sizes had been introduced into the heart.

105. **Rubber Bag Method of Removal of Foreign Bodies in Air Passages.**—Helferich illustrates a case in which the metal cap of a pencil had become lodged in the left bronchus. He succeeded in removing it without trouble by introducing a small brass tube over one end of which a rubber cot or finger had been tied. After the collapsed rubber bag had been pushed down into the metal cap in the bronchus, the bag was inflated. This evidently pressed back the walls of the bronchus in which the cap had been embedded, and the bag clung to the cap which was easily withdrawn with it. He suggests that this combination of a long, narrow rubber bag and tube might be found useful to tampon a bronchus during an operation, or possibly for other purposes.

108. **Extracranial Aneurism of the Internal Carotid.**—Werner has collected 11 cases and adds the description of one personally observed. On account of the tough consistency, negative result of puncture and lack of pulsation, the tumor about the size of a walnut was supposed to be a fibro- or lympho-sarcoma, and its extirpation was attempted through the mouth. The gush of arterial blood was controlled by tampons and after low tracheotomy had been done and the common carotid litigated, the tumor was resected through the cheek. It was more than half filled with a tough thrombus.

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112 (XLVII, 5-6.) Cryoscopy of Urine in Bilateral Kidney Affections. H. Strauss (Senator's clinic, Berlin).—Die Harnkryoskopie in der Diagnostik der doppelseitiger Nierenerkrankungen.
113 Die intracelluläre Glykogen-Reaction der Leukocyten. S. Kaminer.
114 Albuminurie minima und cyklische Albuminurie. L. Küttner.
115 Mechanism of Absorption. L. Hofbauer (Vienna).—Zur Frage der Resorptions-mechanismen.
116 Influence of Nephrectomy on Electric Conductibility of Blood. A. Bickel (Göttingen).—Experimentelle Untersuchungen über den Einfluss der Nierenausschaltung auf die elektrische Leitfähigkeit des Blutes.
117 Elimination of Glycuronic Acid. M. Bial (v. Leyden's clinic, Berlin).—Ueber die Ausscheidung der Glycuronsäure.
118 Pentosurie und Pentosenreaction. H. Brat.
119 Gangrän des linken Unterschenkels durch Thrombose der Arteria femoralis (wahrscheinlich grippaler Natur) bei einem Diabetiker. M. Loeb.
120 (XLVIII, 1-2.) *Zum Symptomencomplex des Morbus Basedowii. L. v. Schrötter.
121 Results of Experimental Exclusion of Motor Function and Its Significance for Pathology. M. Rothmann (Berlin).—Ergebnisse der exp. Ausschaltung, etc.
122 Accidents from Electricity. S. Jellinek.—Elektrisches Unfallwesen. See abstract page 1178.
123 *Zur [illegible] herapie des Morbus-Basedowii. Die [illegible] J. Donath (Budapest).
124 Ex[illegible] itische Beiträge zur Glycolyse. E. Bendix and A. Bickel.
125 *Determination of Hydrochloric Acid in Stomach Contents. O. Reissner.—Zur Methodik der Salzsäurebestimmung am Mageninhalt.
126 *Ueber späte Rachitis (R. tarda). E. Roos (Freiburg).
127 *Cardiale Bradycardie. H. Silbergleit (Berlin).
128 Test for Determination of Potassium Iodid in Urine. H. Singer (Elberfeld).—Methodisches zur qualitativen Bestimmung des Iodkali im Harn.
129 Ueber die Bakterien-Menge in menschlicher Feces. A. Klein (Amsterdam).
130 (No. 3-4.) *Study of Saline Infusion. W. Ercklentz (Breslau).—Exp. und klin. Untersuchungen über die Leistungen der Kochsalzinfusion.
131 Die Miliartuberculose der Chorioiden als Symptom der acuten allgem. Miliartuberculose. E. Margulies.
132 Physiologic Sources of Unphysiologic Movements. A. Adamkiewicz (Vienna).

133 *Relations of Acid-Proof Pseudo- to Tubercle Bacilli. F. Klemperer.—Beziehungen der säurefesten Saprophyten zu den Tuberkelbacillen.
134 *Recuperating Faculty of Normal Heart. H. Singer.—Einfluss des Trainings auf die Erholungsfähigkeit des normalen Herzens.
135 Trauma; Myelitis; Syringomyelie. L. Huismans (Cologne).
136 Riegler's Acetic-Acid Test of Diabetic Urine. Voltolini.—Werth der R.'sche Acetessigsäurereaction im Harn von Diabetikern. Not Accurate.
137 (No. 5-6.) *Physicotherapy of Chronic Joint Affections. L. Brieger and A. Laqueur.—*Behandlung von chron. Gelenkaffectionen mittelst physikalischen Heilmethoden.*
138 Albuminoids in Exudates. F. Umber.—Zum Studium der Eiweisskörper in Exsudaten.
139 *Cardiac Defects in Children. J. Cassel (Berlin).—Statistische und etiologische Beitrage zur Kenntniss der Herzfehler bei Kindern.
140 Zur Frage des Paratyphus. G. Ascoli (Genoa).
141 *Zur Medikation in Diabetes. Kaufmann.
142 *Bacteria in Intestines After Administration of Disinfectants. J. Strasburger (Bonn).—Ueber Bakterienmenge im Darm bei Anwendung antiseptischer Mittel.

120. Symptom-Complex of Exophthalmic Goiter.—Schrötter has had occasion to observe a case in which exophthalmic goiter was accompanied by a lipomatosis which simulated myxedema. He found thyroid treatment most effectual and attributes the condition to perverted chemical functioning of the thyroid gland. Besides the conditions due to hyperfunction and to hypofunction, we must make a place for those due to abnormal functioning.

123. Blood Pressure in Exophthalmic Goiter.—Donath studied the blood pressure with three varieties of instruments and found that there was no constant standard. It varied, but was usually normal or higher.

125. Determination of Hydrochloric Acid.—Reissner expatiates on the sources of error in the usual tests for hydrochloric acid, and suggests the following as more reliable. The acidity of the stomach contents is determined with litmus paper and a one-tenth normal solution of caustic soda. The same amount of stomach contents is then evaporated to dryness with the one-tenth soda solution in a platinum crucible, and carefully incinerated. After moistening and pulverizing, the residue is extracted with hot water and the chlorin then determined according to Volhard. (*a*). The same procedure is then repeated with the same amount of non-neutralized stomach content (*b*). The chlorin is determined by treating with silver solution, filtering and further treating with ammonium rhodanate (*c*). Then *a* equals the hydrochloric acid plus the combined chlorids; *b* the combined chlorids; *c* the total chlorin; *a* minus *b* equals the hydrochloric acid, and *c* minus *a* the volatile chlorin combinations. Organic acids or their salts do not affect the accuracy of this test. Volatile combinations of chlorin are frequently entirely absent after a Riegel test dinner.

126. Tardy Rachitis.—Roos differentiated rachitis by radioscopy in the 2 cases he describes. It first appeared at the age of 11 in one child, and in the other, the child had apparently quite recovered from ordinary rachitis at 7, but it reappeared again at 15, with a remarkably severe course. The skull and thorax as well as the long bones were affected. He suggests that possibly many cases of supposed scoliosis, genu valgum and varum, developing between 10 and 20, may in reality have been cases of this tardy rachitis. The first patient was materially improved by phosphorus-cod liver oil.

127. Cardial Bradycardia.—Silbergleit's 2 patients were affected with arteriosclerosis or stenosis of the aorta. Atropin did not accelerate the pulse, thus demonstrating the non-complicity of the vagus in the phenomenon.

130. What Saline Infusions Can Accomplish.—Ercklentz inoculated rabbits with staphylococci or injected anilin, arsenic, ricin or cantharidin, and then injected large amounts of a .7 or .9 per cent. saline solution. When copious diuresis was induced the poison was eliminated more rapidly, but it was not invariably induced, probably owing to the different diffusion of the various substances through membranes, but chiefly to the behavior of the kidneys. When the latter were injured by the effects of the intoxication they were unable to respond to the saline infusion with increased diuresis. The kidneys of the animals that succumbed to the intoxication were always more pathologic than those of the rabbits that survived. His clinical experience was also favorable. He thinks there is a wide field for "continuous infusion," that is, repeated injections. In one case of very severe anemia he made 14 infusions of 800 to 1,200 c.c. each, in the course of a month as the last resort. The patient gained fifteen pounds and the erythrocytes rose from 710,000 to 1,240,000; the Hb. from 2.3 to 5.3 per cent.

133. Relations Between Pseudo- and Tubercle Bacilli.—Klemperer announces that he has succeeded in rendering guinea-pigs immune to tuberculosis infection by preliminary injections of acid-proof pseudo-tubercle bacilli.

134. Recuperating Power of Heart.—Singer recommends testing the recuperating power of the heart by the pulse count at the end of series of graduated exercises. This affords an objective means of determining the functional capacity of the heart for prognosis and therapy, tangible evidence of improvement under treatment or a warning that the heart is being overtaxed.

137. Physicotherapy of Chronic Joint Affections.—Brieger has treated at the Berlin Institute of Physicotherapy 20 cases of chronic articular rheumatism, 4 of omarthritis and 6 of gonorrheal arthritis. His experience confirms the great value of hot air, hot water and suitable massage in these affections. Passive congestion failed to demonstrate any benefit.

139. Cardiac Defects in Children.—Cassel reviews 107 cases. In 49 there was a history of articular rheumatism in the etiology; in 2 of chorea; in 2 of purpura; in 4 of scarlet fever, in one each of typhoid, measles and influenza, and in 17 the origin was unknown. The defect was congenital in 26, dubious in 4 and certainly acquired in 77.

141. Medication in Diabetics.—Extensive research at v. Noorden's clinic has demonstrated anew that all medication ranks far below dietetic measures in diabetes. It is a mistake to attempt to relieve the patient of dietary restrictions.

142. Bacteria in Intestines After Administration of Disinfectants.—Strasburger announces as the conclusions of extensive research on man and animals that most of the purges and disinfectants, including calomel, actually increase the number of bacteria in the intestines, as they injure the lining and thus afford more favorable conditions for their proliferation. Proper absorption of well-digested food deprives the bacteria of their nutrient medium and hence reduces their number. Abstention from food has the same effect. No disinfecting power could be observed with naphthalin, and only very slight with salicylic acid; tannocol was the most effective. Ingestion of readily absorbed food or abstention from food are the most effectual means at our command for restricting bacterial proliferation in the bowel.

Gazzetta degli Ospedali, Milan.

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143 (XXIV, 17.) *Patogenesi del delirio nel corso delle malattie infettive. A. Amantini.
144 *La sintomatologia della malaria nel Veneto in raffronto con la diagnosi microscopica. P. Luigi.
145 *Action of Renal Extract and of Blood from Renal Veins on Animals After Bilateral Nephrectomy. P. Fiori (Pisa).—L'azione dell'estratto renale, etc.
146 Benefits from Maragliano Serum in Four Cases of Tuberculosis. H. Hager (Magdeburg).—Nuovo contributo alla cura della tuberculosi polmonare col siero antitubercolare.
147 (No. 20.) Bile Pigments in Feces. R. Supino (Pisa).—Su la ricerca di alcuni pigmenti biliare nelle feci e del loro significato clinico.
148 *New Method of Operating on Inguinal Hernia. C. Zatti.—Un nuovo processo operatorio dell'ernia inguinale senza fili perduti, con rinforzamento degli strati della parete.
149 Treatment of Pneumonia with Toxic Doses of Digitalis. P. Adolfo.—La polmonite curata colla digitale a dose tossiche.
150 *Perinefrite tubercolare e cura iodica alla Durante. A. de Blasi.
151 (No. 23.) Experimental Arthritis Consecutive to Endovenous Injection of Staphylococcus Aureus without Traumatism of Joint. P. Fiorentini (Messina).—*Sulle artriti da stafilococco, etc.*
152 *Alcune applicazioni terapeutiche della "Cerebrina." A. Muzzarelli.
153 Success of Antituberculosis Serum in Case of Subacute Polyserositis. I. Monteverdi.—Cura della *polliorreminite* sub acuta e lenta col siero Maragliano.
154 (No. 26.) *Meningite cerebrospinale fibrino-purulenta da bacillo di Pfeiffer. G. Mya.
155 L'etiologia e la patogenesi delle dispepsie. G. Campanella.
156 Successful Serum Treatment of Malignant Anthrax. C. Bottignani (Siena).—La pustola maligna curata con le iniezioni sottocutanee ed endovenose di siero anticarbonchioso.

157 Sulla pseudo coxalgie. G. Pirolli.
158 (No. 29.) Sulla frequente coincidenza dell'ernia coll'idrocele. V. Remedi.
159 *Contributo alla casulstica dell forma apiretica dell'endocardite maligna. G. Fazio.
160 Successful Serum Treatment of Malignant Anthrax. G. Alusrindo.—Contributo clinico alla sieroterapia specifica anticarbonchiosa.
161 (No. 32.) Resistenza delle emazie (of the red corpuscles), pressione osmotica e conductibilità elettrica del siero nei pneumonitici. C. Molon (De Giovanni's clinic, Padua).
162 Sulle fibre elastiche nelle cicatrici cutanee. R. Pirone.
163 *Serum Treatment of Tuberculosis. E. Bellinzoni.—Tubercolosi polmonare.
164 *Cura della lebra col mercurio De Luca.

143. **Pathogenesis of Delirium in Infectious Diseases.**—Amantini argues to prove that the principal factor in delirium is a disturbance in the circulation of the brain. He reasons that prompt relief of the circulation would benefit the delirium, and describes 7 cases treated on this principle with remarkably favorable results. The delirium, hallucinations and excitement were very severe, but the application of one to six leeches to the mastoid process banished the delirium at once, as if by magic, or at most in thirty to forty minutes. In another case the delirium subsided spontaneously after a profuse epistaxis. The disease was pneumonia in 5, acute articular rheumatism in 1 and erysipelas in the other. The delirium had been previously treated by ice to the head without avail.

144. **Symptomatology of Malaria Compared with the Microscopic Findings.**—Luigi rapidly reviews the symptoms as grouped in 500 malarial subjects observed, further classified according to the microscopic diagnosis. Profuse sweating was restricted to quartan and mild tertian infection. Hematuria was noted only in 2 cases of estivo-autumnal. With the exception of headache and vomiting, which are common to all varieties, other nervous symptoms were observed solely with the estivo-autumnal. He describes several instructive cases in which this form presented itself in the guise of a totally different disease, in one case simulating perfectly Addison's disease, and in others cerebrospinal meningitis, or nephritis with uremic symptoms. Exhibition of quinin restored the patients promptly to health after they had been ineffectually treated for the supposed other affection. In another case the patient showed all the symptoms of acute pulmonary phthisis, catarrh of the apices, etc., with the exception of bacilli in the sputa, but quinin soon banished the syndrome. In another patient, persistent pain in the first cervical vertebræ, increased by pressure, was assumed to be a tuberculous affection, but likewise vanished under quinin without leaving a trace.

145. **Action of Kidney Extract and Blood from Renal Veins on Nephrectomized Animals.**—Fiori removed both kidneys from rabbits and then injected them with kidney extract or with serum from the blood of the renal veins, either into the peritoneum or in a vein. The injections evidently retarded the manifestation of symptoms of intoxication, postponed the fatal termination, and had a beneficial action on the bulbospinal phenomena, respiration, etc. Further experiments with ligating the ureters in other animals showed that they survived longer than those whose kidneys had been removed, and the symptoms exhibited were less acute. He thinks that these results suggest a protecting secretion on the part of the kidneys.

148. **New Method of Herniotomy Without Sunken Sutures.**—Zatti has operated 55 times according to the technic described. The object is to strengthen the walls by superposition of the various layers, removing the threads later. The results have been excellent. He proceeds at first according to the Bassini method and then strengthens the wall, closing the wound without drainage. Several cuts show the simple technic, the deep muscles drawn down, the aponeurosis up, both held with sutures removed later.

150. **Iodin Treatment of Tuberculous Perinephritis.**—De Blasi reports a case diagnosed by exclusion as tuberculous perinephritis. The patient was a peasant, 27 years old, who had suffered from a pleuritis on the same side eleven years before, possibly of tuberculous nature. The typical fever vanished after 10 injections of 2 cg. of iodin each, according to Durante's technic, and after 20 more the patient was completely restored. The tumor in the lumbar region had subsided, and the general condition was excellent.

152. **Cerebrin in Nervous Affections.**—The extract of brain substance which Babes, Lyon and Zanoni have found effectual in the treatment of nervous affections was applied in the treatment of one case each of infantile eclampsia, essential epilepsy, dysmenorrhea and several cases of neurasthenia. In the latter it was alternated with testicle extract and in the case of dysmenorrhea with ovarin. The results were always fine and encourage further use of this treatment in such affections. The convulsions have not recurred in the case of infantile eclampsia during the five months since. Nineteen injections of the cerebrin were made on alternate days. The extracts were prepared at Zanoni's Institute for Infectious Diseases at Genoa.

151. **Grippal Cerebrospinal Meningitis.**—Mya has observed 3 cases of fibrino-purulent meningitis in breast nurslings. The meningitis was associated with inflammation of other serous or mucous membranes. During the same season he observed a number of other cases of a fibrino-purulent serositis, all induced by the influenza bacillus, in some cases accompanying measles. He thinks that we must concede to the Pfeiffer bacillus the power of inducing acute fibrino-purulent inflammation of the serous membranes in epidemic form, the same as to Fraenkel's diplococcus and the meningococcus. One of the 3 cases described recovered. The meningitis had been accompanied by otitis media and bronchopneumonia on the left side, and the little patient was left with paralysis of the facialis on this side and of the leg on the other.

159. **Apyretic Malignant Endocarditis.**—Fazio's patient was a robust soldier, and the ulcerative endocarditis developed without any preceding general affection and ran its course to a fatal termination in six weeks without fever at any time. The diagnosis had to be based on the subjective symptoms which were the first to develop. There were no signs of general infection, nor of embolism until toward the last. Fazio refers to other atypical cases on record, and mentions Walker's Chicago case in which auscultation was negative for a month.

163. **Serum Treatment of Tuberculosis.**—Bellinzoni reports 4 cases of tuberculosis immeasurably benefited by serum treatment, with one exception. This was a pregnant woman, and the pregnancy seemed to annul the action of the serum treatment. The tuberculosis continued its course, unchecked, evidently aggravated by the pregnancy.

164. **Mercury in Leprosy.**—De Luca reports 2 cases of leprosy treated by intravenous injection of mercury according to Baccelli's technic. The ulcerations healed completely in one, and nearly had healed on the other when the patient was lost sight of. He does not deny that the remarkably favorable results observed may have been due to a natural tendency to heal, but observes that it is seldom that Nature interferes so promptly and radically and the recovery following so close on the vigorous medication must be more than a mere coincidence.

New Patents.

Patents of interest to physicians issued May 19 and 26:

728432. Catamenial napkin. T. C. Asplund, New York.
728434. Chest bandage. Josie Baldwin. Tremont, Me.
728444. Aseptic ligature receptacle. H. L. Cox, Toronto, Can.
728220 and 728221. Disinfecting apparatus. Eugene Fournier, Paris, France.
728589. Surgical instrument. Leone Levi, Genoa, Italy.
728493. Shield for vaccination or tumors. Ellis S. Oliver, Newark, N. J.
728328. Atomizer. Charles A. Tatum, New York.
728526. Ear pump. Julius B. Wantz, Chicago.
728865. Invalid bed. Joseph Cheetham, Esbon, Kans.
729138. Holder for atomizers. Joseph C. Cramer, Sawtelle, Cal.
729293. Vaccine shield. Albert B. Dorman, Winthrop Mass.
729317. Means for treating nervous diseases by electromusical vibrations. Henry Fleetwood, Los Angeles, Cal.
729166. X-ray tube. John O. Heinze, Jr., Chelsea, Mass.
729500. Eye shade. Wm. F. Mahony, Washington, D. C.
728980. Surgical applicator. Elzie L. Ridgway and D. H. Bailey, Denison, Texas.
729011. Hypodermic syringe. Charles J. Tagliabue and F. W. Steuer, Brooklyn.
729017. Hernial truss. Charles R. Turner, Westfield, Mass.
729019. Vaporizer. James H. Valentine, Chatham, N. J.
729459. Disinfecting apparatus. Charles J. Walz, New York.

smallpox appeared on her. It is to be noted that this child was exposed to the smallpox infection at the same time as her sister. On admission to the hospital the little patient was covered with firm variolous papules. The face, arms and legs were profusely involved, the trunk to a lesser extent. On the forehead, near the border of the hair, were two crusted and superficially ulcerated varicella lesions. A half dozen or more lesions were also observed on the back and a few on the abdomen and chest. On the lower portion of the back was a comparatively recent chicken-pox vesicle just beginning to dry. The subsequent course of the case left no doubt as to the variolous nature of the second eruption. Two other children of this family who were protected against smallpox by previous vaccination showed crusted varicellous lesions on different portions of the body.

Chicken-pox may usually be distinguished from smallpox without much difficulty. In exceptional instances, however, the diagnosis *may present perplexities which* may cause even a physician experienced in these diseases to delay in pronouncing *definitely* as to the nature of the disease. Errors may occur through regarding a mild smallpox as chicken-pox or looking on a severe varicella as variola. The points of differential importance are as follows:

1. *The Vaccinal Condition of the Patient.*—If a child under 5 or 6 years of age presents an eruption which exhibits features both of chicken-pox and of smallpox, the presence of a typical vaccinal cicatrix would constitute strong presumptive evidence against the variolous nature of the exanthem; for successfully vaccinated children of this age do not acquire smallpox save under extraordinary circumstances. The same evidence would obtain in an adult successfully vaccinated within a similar period of time.

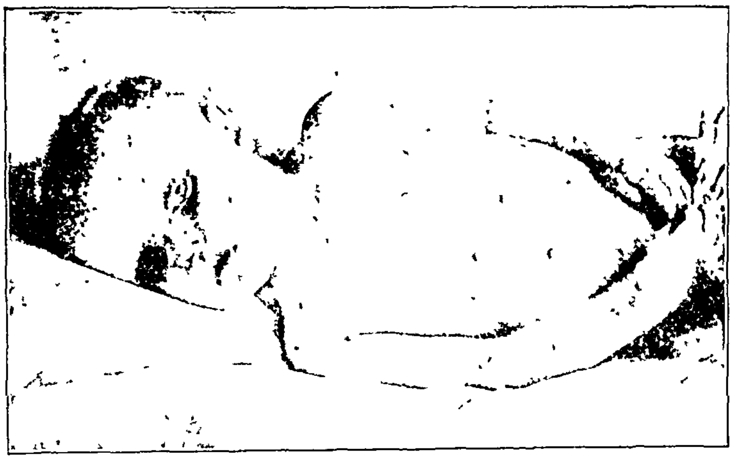
Fig. 1.—Extremely mild smallpox in an unvaccinated child.

2. *Initial Symptoms.*—The appearance of the smallpox eruption is preceded by two or three days by an illness characterized in its most complete form by chills, fever, headache, backache, vertigo, nausea and vomiting, prostration and general pains. The more severe the oncoming eruption the more pronounced are these symptoms apt to be. The syndrome is often incomplete, the invasive illness presenting but a few of the above mentioned symptoms. In exceptionally mild cases one may not be able at all to elicit a history of a prodromal stage. It is extremely uncommon, however, for this to occur, and the existence of premonitory symptoms should always be regarded as a matter of great differential importance.

Except for *occasional malaise a half day* or so before the appearance of the chicken-pox eruption there is, in the vast majority of cases, no prodromal stage. We have recently had the opportunity at the Municipal Hospital of studying an outbreak of *chicken-pox among* convalescents from scarlet fever. The continuous temperature records show that in nearly every case the eruption appeared synchronously with or before any pyrexial elevation. In exceptional cases, in adults, chicken-pox may, however, be preceded by a prodromal illness suggestive of, but milder, than that observed in smallpox. These patients seldom experience vomiting or prostration and the febrile elevation is, as a rule, moderate.

3. *Constitutional Symptoms.*—The fever and prostration in the eruptive stage are usually more severe in smallpox than in chicken-pox. This is not an invariable guide, however, as severe cases of varicella are accompanied by *higher temperature* than very mild cases of smallpox.

4. *Distribution of the Eruption.*—It is a well-known and important fact that the smallpox eruption attacks with predilection the face and distal portions of the extremities. On the trunk, and especially the abdomen, the lesions are nearly always more sparse. In chicken-pox the eruption is usually most profuse on the trunk, particularly the back, and relatively sparse on the wrists, hands, feet and face. In general it may be stated that smallpox prefers the exposed surfaces and chicken-pox the covered.

It has been claimed that chicken-pox does not attack the palmar and plantar surfaces. This statement is erroneous, inasmuch as the palms of the hands and soles of the feet are every now and then attacked in pronounced cases. Of course, one never sees such a profusion of lesions in these regions as is observed in smallpox.

5. *Extent of the Eruption.*—The number of lesions on the skin should not be regarded as important evidence. As an example of a sparse eruption may be mentioned an unvaccinated child, admitted some months ago into the Municipal Hospital, who had but five lesions on the entire cutaneous surface. On the other hand, a lad with chicken-pox occupying a different ward had about 1,400 lesions and another boy about 3,000.

6. *Character of the Lesions.*—In smallpox the eruption begins as firm papules, which slowly increase in size and develop into vesicles and pustules. Not all variolous papules are "shotty," but they are more deeply seated and have a more infiltrated base than the chicken-pox lesions. The variolous vesicles are often harder than the papules. They are moderately uniform in size and are often, although by no means always, umbilicated. The vesicles are multilocular and difficult to rupture with the fingernail.

Chicken-pox lesions may begin as maculo-papules, but within a few hours some become frankly vesicular. The epidermal roof is thin and easily broken, permitting the exit of a clear watery serum. With the collapse of the vesicle the infiltration seems to disappear. The vesicle is usually unilocular; but little diagnostic value, however, should be placed on the comparative degree of evacuation of variolous and varicellous vesicles with a needle.

Chicken-pox lesions vary greatly in size, some being as small as a millet seed and others as large as a fingernail. They do not become umbilicated save secondarily by central caving in or desiccation. The early drying with the production of a depressed blackish crust in the center and irregular puckering of the vesicles or pustule on the periphery is highly characteristic of chicken-pox.

It is not rare in an extensive eruption of varicella to find one or several vesicles which resemble variolous vesicles, and, on the other hand, in smallpox to occasionally see a few superficial vesicles which resemble those of chicken-pox. Again, in varicella in adults it is not rare to find on the thick skin of the forehead very firm papsules, or even nodules.

7. *Manner of Eruption.*—The eruption of smallpox comes out without interruption in the course of twenty-four or forty-eight hours. The lesions show, therefore, a quite uniform development. (It should be remarked, however, that the eruption on the face is always a little in advance of the development elsewhere.) The chicken-pox eruption comes out in crops on successive or alternate days, and the lesions may be seen in varying stages of development. The coexistence of recent tense vesicles, older puckered vesico-pustules and dried crusts is highly characteristic of the disease.

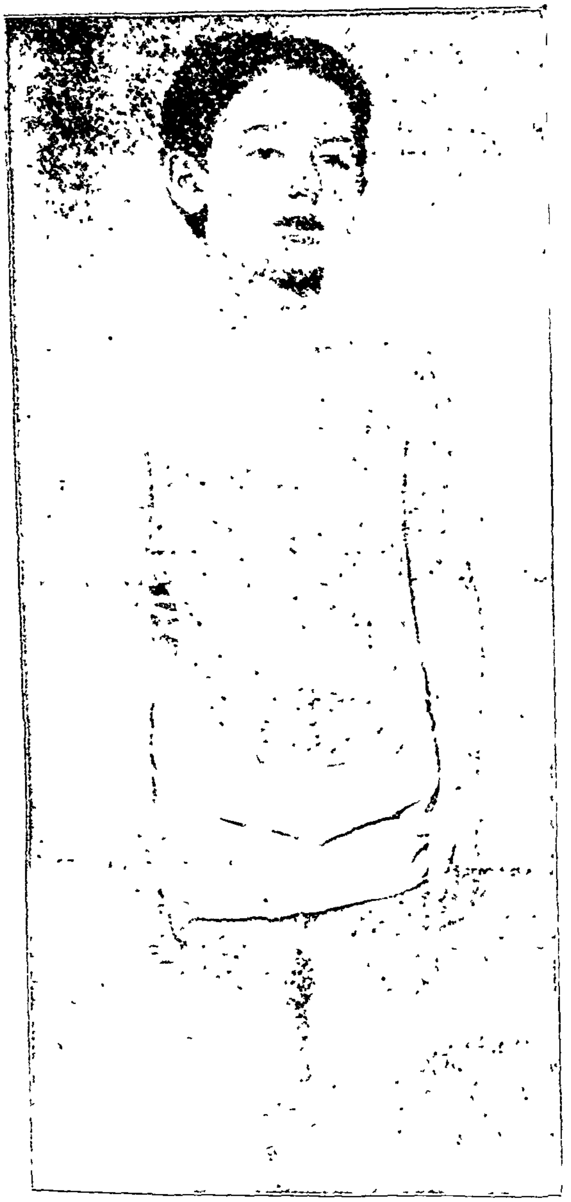

Fig. 2.—Extensive chicken pox. Number of lesions estimated to be about 3,000.

8. *Course of the Eruption.*—Smallpox lesions undergo a gradual evolution from papule to crust in the course of 10 to 12 days. (In modified cases 5 to 6 days.) Chicken-pox lesions last from 2 to 4 days and then crust. The crusts of smallpox are dense and compact, while those of chicken-pox are thin and friable. The presence of numerous hard, mahogany-colored crusts imbedded in the horny layer of the palms and soles bespeaks smallpox.

There is no one characteristic symptom on which a differential diagnosis between smallpox and chicken-pox can be based. The case is to be viewed in all its aspects and a diagnosis made from the history and the associated local and constitutional manifestations. A due sense of proportion should be exercised and proper weight accorded to the presence and absence of the various symptoms. Even when this is done, there are occasional cases in which twenty-four hours' delay and observation are desirable in order to definitely establish the diagnosis.

CHICKEN-POX IN ADULTS.

It is generally stated that chicken-pox is extremely rare among adults. Thomas, who had a very large experience in eruptive fever, writes (Ziemssen's Encyclopedia of Medicine, page 8): "In children over 10 years of age attacks are infrequent, and I never saw an adult suffering from varicella." Kinsman, who had an extensive experience covering thirty years, and Corlett, who has studied eruptive fever for twenty years, make similar statements. J. Lewis Smith and Flint each saw one case. Jonathan Hutchinson saw one or two cases in patients about 20 years old; he remarks that a "point of great interest in varicella is the almost absolute immunity of adults."

During the past two years about 2,300 patients suffering from smallpox have been treated in the Municipal Hospital. Ten adult patients sent in with the diagnosis of smallpox were found to have chicken-pox. The diagnosis in these cases was confirmed by my senior colleague, Dr. Wm. M. Welch, who during the past thirty-three years has seen over 7,000 cases of smallpox. All of these patients were carefully vaccinated and those not protected by previous vaccination took the vaccine disease.

In addition to these cases I have seen 6 other adult patients with varicella. The ages of these 16 patients are as follows: two were 20 years old, one 21, one 22, one 25, one 26, two 28, one 30, two 32, one 34, two 35, one 38, and one 39. Ten of these patients were males and six females; seven were negroes and nine were whites.

It is thus seen that varicella is not so rare among adults as the experience of the above mentioned careful observers would seem to indicate. The experience in London during the recent extensive smallpox epidemic was much like ours at the Municipal Hospital. Dr. Wanklyn, the smallpox referee and medical superintendent of the ambulance service of the Metropolitan Asylums Board, reports that 200 cases of chicken-pox were sent to the diagnosing station, and that 16.7 per cent., or 33, of these were persons over 18 years of age.

INCUBATION PERIOD OF CHICKEN-POX.

The incubation period of chicken-pox is stated by Trousseau, Gee, Thomas, Körber, Hesse and others to be about 13 to 17 days. It is recognized, however, that much wider variations may occur. In a recent epidemic in the Municipal Hospital it was found possible to determine the incubation stage in sixteen cases. The periods were as follows: 13 days in 1 case; 14 in 7 cases; 15 in 3 cases; 17 in 2 cases; 18 in 1 case; 19 in 1 case, and 21 days in 1 case.

The period of incubation of varicella is thus seen to be both longer and more variable than that of smallpox. The vast majority of patients who are breeding variola fall sick from the tenth to twelfth day after exposure.

A recent experience in a physician's family would seem to indicate that varicella may be transmitted before the appearance of the exanthem.

A girl of 16 years developed slight sore throat and a little fever, and was carefully isolated in an upper portion of the house. A small whitish patch on the posterior pharyngeal wall was noticed. On the following day the eruption of chicken-pox appeared. A brother, 8 years of age, was kept in a distant part of the house and there was no inter-communication whatsoever. Sixteen days after exposure, that is, exposure to the sister, on the day preceding the appearance of her eruption, the boy developed chicken-pox.

This fact is not to be wondered at when we remember that smallpox may be transmitted by a patient before the outbreak of the eruption.

The fluid of early varicellous lesions has, in cases in which I have cultured it, always been sterile. No growth takes place on any of the ordinary nutrient media. Examination of the fluid under the microscope shows an almost complete absence of cellular constituents. I have not noted the small round bodies, regarded by many as protozoa, which are found in the clear fluid of variolous vesicles.

Not infrequently varicellous lesions spread on the periphery and develop into bullæ; these may reach the size of a quarter dollar or even larger. The drying of the contents produces flat, yellowish, irregular crusts. The peripheral spreading of varicellous vesicles and pustules is due to secondary infection with staphylococci and streptococci. This condition may appropriately be called impetigo varicellosa; it is quite analogous to the impetigo variolosa which is so common in bad cases of smallpox. The adventitious skin infection in varicella may produce a secondary fever which may rise to 102 F. or thereabouts and with remissions persist for three or four days. As in smallpox, boils may result from a deeper infection with pyogenic organisms.

DISCUSSION.

Dr. J. B. Kessler, Iowa City, Ia.—We have had a somewhat varied experience in our locality with variola. Whether or not the Spanish-American war had anything to do with changing the eruption of varicella—it seems to me a good many of our physicians, not dermatologists, have made many mistakes in paying more attention to the umbilication than formerly. The past winter I was called to see a family, with five children, the eruption being most extensive on the back. There was a great deal of umbilication, and a good deal of necrotic tissue, the new vesicles being friable and breaking readily. From the character of the vesicles I diagnosed the cases as varicella, which proved to be the case, as they were not quarantined and no one else contracted the disease.

In Des Moines, in an effort to get rid of variola, the board of health passed an ordinance quarantining all cases of varicella as well as variola, and I think in our city we had a number of cases quarantined that were not variola.

The older text-books taught us that the umbilicated vesicle was variola, but I pay more attention to the character of the vesicle than anything else.

The number of cases with us, varicella and variola, have been great but the disease has been mild. In our city we have had but one severe case, an adult probably forty or fifty years of age.

A good many of our people do not call a physician, and I think many cases of variola were not quarantined because of the mildness of the cases and the dread of people in calling a physician and being quarantined for thirty days. We have had a good deal of the so-called Cuban itch. Mild cases of variola they would claim to be Cuban itch.

Dr. William L. Baum, Chicago—I was much pleased to hear Dr. Schamberg call attention to the fact that the disease occurs quite frequently in adults and to the occasional presence of the eruption on the palmar surfaces. At Cook County Hospital there have been a number of instances in which the disease attacked adults, during one epidemic several nurses and one interne contracted it. The character of the eruption is often influenced by medication. Four years ago varicella developed among a number of children suffering from whooping cough. Two of these cases, to whom large doses of bromoform had been given, developed an eruption which consisted of large bullæ surrounded by an extensive hemorrhagic halo.

Dr. A. H. Ohmann-Dumesnil, St. Louis—One point in Dr. Schamberg's paper that interested me very much is the comparatively rare occurrence of varicella in adults. In an epidemic of 960 cases but one case of varicella in an adult was observed by me, a woman of 23, and she only had 6 lesions on the forearm and one in the palm of the left hand, which is also an interesting point, to which Dr. Schamberg called attention. It is not mentioned by the majority of authors and is a location which might lead to a doubt as to the diagnosis concerning the other lesions.

Dr. J. B. Shelmire, Dallas, Texas—Five years ago, when 40 years of age, I had a personal experience which proved that adults can have varicella. I treated a young lady with varicella and some two weeks afterward I found a vesicle on my chest. They continued to come, and I had them on my body, limbs, palms, soles and scalp. Every authority I consulted said the disease was limited to children, that adults could not have varicella.

A CLINICAL REPORT OF A CASE OF BLASTOMYCOSIS OF THE SKIN FROM ACCIDENTAL INOCULATION.*

NEWTON EVANS, M.D.
BATTLE CREEK, MICH.

The subject of this report is a physician, 28 years of age, who has had unusually good health, with no history of specific or venereal disease or tuberculosis or any tuberculosis in the immediate family.

On December 4, at an autopsy on a case of systemic blastomycosis, he accidentally inflicted a very slight skin wound with the point of a needle on the palmar surface of the left index finger, just in the fold at the junction of the proximal and middle phalanges. The wound was insignificant and apparently healed. At the end of about one week a very small pustule appeared at this point. This was opened and a small drop of pus removed. It was not noticed again until after several days, when a small pustule again appeared and a small drop of pus was evacuated, as before.

The affected area was very small, about the size of a pin head or less. The minute pustule was covered by a very thin layer, probably only the epidermis. The base of the little cavity, after the pus was evacuated, appeared red and granular, and was very tender when touched by any instrument. The lesion, before opening, exhibited little tenderness. This course of events was repeated two or three times until in the first week of January, 1903, when signs of an acute inflammatory process appeared. An area of about 1.5 centimeters diameter became swollen, reddened and painful. This was immediately incised, with an idea that it was an acute pus infection, the incision being about one-quarter of an inch in length. It failed to improve and, on the second day afterwards, a longer and deeper incision was made. At this time the finger was considerably swollen, painful and tender. The axillary lymph-nodes began to swell and at that time there were distinct red lines, following the lymph channels of the forearm (acute lymphangitis.) The axillary glands continued to swell and became more tender. The whole mass became as large as a hen's egg. The lymphangitis of the forearm disappeared.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

The lesion on the finger did not improve, but the tissue about the incision was swollen, soft and apparently granulomatous, giving it a sort of fungous appearance. About January 12 the finger was curetted and all of the mass of granulation tissue was removed down to the tendon, leaving an opening about one-half inch in diameter. This was packed with iodoform gauze and gradually healed. During this time there was a slight rise of temperature, 100-101, and other febrile symptoms. After about two weeks the wound was well filled and a crust was allowed to form on the surface. In a few days it was noticed that little pustules were forming around and beneath the edges of the crust. These were evacuated. The tenderness was not marked. There also formed on the back of the hand in the subcutaneous tissue, over the metacarpal bone of the index finger, a small nodule of the size of a split pea, at first hard and later softened. This was not painful. It remained for from six to eight weeks, gradually growing smaller and disappeared. Simultaneously with the appearance of this nodule, a somewhat similar nodule appeared on the palmar surface of the affected finger, about one-half an inch above the lesion. This lesion contained a very small pus cavity, just beneath the epidermis, which was evacuated a number of times and decreased in size, but has not yet entirely disappeared.

The original wound finally completely healed, so that it was covered by epidermis about February 5, but the appearance was peculiar. The surface of the scar was not smooth but very scaly, the epidermis coming off in flakes or small crusts, and surrounding it on all sides were minute pustules in, or just beneath, the epithelium, which contained a large or smaller drop of very tenacious pus. These were easily evacuated and the cavities cauterized with pure carbolic acid.

About the edges of the scaly area the tissue is reddened, indurated and swollen, rather nodular and somewhat tender. The whole diseased area is about one-half an inch in diameter. The redness and tenderness and number of small pustules decreased under treatment.

The granulation tissue which was curetted from the lesion on January 12 was imbedded and sectioned and subjected to microscopic examination, which revealed very little remaining epithelium on the surface, a mass of necrotic tissue occupying its place. Beneath the epidermis the corium was filled with a dense cellular exudate, for the most part consisting of polynuclear leucocytes. Scattered about in this tissue were found numbers of the typical, doubly-contured, budding organisms, 10 to 12 microns in diameter, exactly identical in appearance to the organisms found in immense numbers in the case on which an autopsy was performed December 4, and from which the disease presumably was contracted.

On numerous occasions during the course of the affection cultures have been attempted. Those taken during the severe acute symptoms, when an open ulcer was present, after the slight operative procedures, showed the presence of pus cocci, and the symptoms of acute lymphangitis and febrile reaction were probably due to the pus infection, which was secondary to the original blastomycetic infection.

The cultures taken after the healing of the open sore from the typical miliary abscesses in the border of the lesion, for the most part, have been sterile, no growth whatever appearing. However, one tube, inoculated March 13 from a drop of tenacious pus from a miliary abscess, showed, after about one month, a single raised colony, also one inoculated April 1 showed three colonies, composed of the typical mold-like fungus, as they are seen in the cultures made from the original case, reported by Ormsby and Miller.[1]

We also made repeated microscopic examinations of smeared specimens of this pus, but have been unable to find any adult parasites.

The changes in the axillary lymph glands are a matter of doubt, as the glands were not removed and microscopic examination impossible. In January, when the acute process in the finger lesion was at its height, these lymph nodes were greatly swollen and tender and apparently coalesced, so that a large mass, about the size of an egg, was present. It was quite moveable. This mass decreased in size slowly, and as it did so a peculiar condition of the lymph channels of the upper arm was noticed. On raising the arm to a horizontal position three or four cord-like structures were easily felt beneath the skin, connected with the swollen lymph nodes and extending down the arm for several inches. One of especial size was plainly felt to be nodular, resembling a string of beads. It apparently was about one-eighth of an inch in diameter. These lymph channels were greatly shortened by the inflammatory process, and prevented the raising of the arm above the level of the shoulder. The condition has greatly improved and almost completely disappeared.

About fourteen days after the acute process was at its height, and the lesion was thoroughly curetted, symptoms developed resembling acute articular rheumatism. The left wrist and both ankles became swollen, hot and tender, and on the anterior surface of both lower legs there appeared raised, reddened and tender areas, from one-half to two inches in diameter, which resembled erythema nodosum. There was a slight febrile reaction (101 F.). These symptoms subsided in about two weeks.

At present the only symptoms are the indurated and scaling lesion on the finger, showing in its borders a few miliary abscesses; and a rounded mass in the axilla, about 1 centimeter in diameter.

From March 15 to April 15 the lesion on the hand was exposed daily to the actinic ray produced by a light machine. The change during that time has not been marked. The abscesses are less numerous and the scar tissue at the center more flexible.

ETIOLOGY.

So far as I have been able to ascertain, this is the only reported case of blastomycetic infection in which the exact source of infection has been known with any degree of certainty. A large percentage of the reported cases give a definite history of trauma of the skin at the point of infection. For instance, one case injured his hand in tearing down an old kitchen,[2] the lesion appearing in the wound. Another scraped the skin from his arm on a wooden truck.[3] However, in many cases, no history of direct injury is given. The location of the majority of the lesions on the upper extremities and face would favor the idea that some slight lesions of the skin which more frequently occur in these locations and which probably are more often exposed to the infection, are necessary for the entrance of the organism.

The occupations of the persons affected have been numerous. It is apparent, however, that those who perform some manual labor, and especially work out of doors, are the more often affected. I know of no reports of cases in clerks, bookkeepers, stenographers or professional men, outside of physicians.

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[1] Ormsby and Miller. Journal Cut Disease, March, 1903.

[2] Montgomery and Rickets: Journal of Cut and Gen.-Urin Diseases, January, 1901.

[3] Hyde and Rickets. Journal of Cut and Gen.-Urin Dis., January, 1901.

LOCATION OF LESIONS.

The lesions have been more numerous on the hands, arms, face and lower extremities, but, to my knowledge, only two previous cases have been reported in which the disease affected the plantar or palmar surfaces. In the case of Anthony and Herzog,[4] the plantar surface was extensively involved with other portions of the lower extremity. In the case of systemic infection of Ormsby and Miller the lesions of the skin were subcutaneous and evidently originated by metastasis from the blood, nevertheless it was very evident that the skin of the trunk was much less extensively attacked than the head and extremities. In this case there were lesions on plantar and palmar surfaces.

INVOLVEMENT OF LYMPH GLANDS.

In the cases reported the lymphoid structures have been noticeably free from attack. Only in systemic cases, and not extensively in these, have the lesions been found in lymph nodes. In the case of Ormsby and Miller the peribronchial lymph nodes showed no parasites on microscopic examination, while the lungs were almost completely destroyed by the growth of the organism in their structure. In the case of a negro recently reported by Gilchrist[5] the lymph nodes were involved. This case recovered after potassium iodid administration.

CONNECTION WITH RHEUMATIC SYMPTOMS.

Ophüls'[6] systemic case which resulted fatally had multiple arthritis, also a systemic case reported by Montgomery,[2] which resulted fatally, had symptoms of multiple arthritis and erythema nodosum during his sickness.

TREATMENT.

The administration of potassium iodid in many cases is followed by marked improvement in the lesions, and often a practical cure for the time being is obtained; but, as pointed out by observers who have seen a number of cases, this improvement is not accompanied by a complete eradication of the parasites nor of the miliary abscesses from the lesions. Gilchrist, in his report of the disease in a negro, described complete recovery of the lesions under this treatment.

In the case under consideration in this report, a trial of the actinic ray was made, exposures of ten minutes daily for one month being made. During this time there was considerable improvement in the flexibility of the lesion and the disappearance of the miliary abscesses. After its discontinuance for about a week there were marked exacerbations, the symptoms and the lesion began to involve a greater area. It was then excised.

DISCUSSION.

Dr. A. W. Brayton, Indianapolis—I have reported three cases from Indianapolis, and therefore put myself in the list of those western dermatologists who were for a time thought by some eastern dermatologists to have discovered a mare's nest. But it is certainly a very distinct entity, and it seems to me equally as easy to diagnose as any allied lesion we have. I have emphasized in my cases the extreme boring pain the patient suffered, especially at night. It is not a restful disease at all. The location was in two instances on the fingers, and in the third case on the shin of an old soldier. These locations may have been the reason for the very considerable pain they suffered. It is a matter of considerable interest that so many cases were found within two or three years in the west and scarcely a case in any other part of the country. The author has gone over the literature more recently than I have and perhaps he can tell us how many cases are known up to the present time in other parts of the country.

Dr. Isadore Dyer, New Orleans—I have a case I would like to cure. The only way to excise it is to cut the man's leg off. I reported the case last year. We have restricted the growth to the lower third of the leg, the two upper thirds of the original growth having healed entirely. I have used iodid of soda, giving as much as 120 grains at a dose. He is a man over seventy years of age. I have depended on local treatment. The application of a 10 per cent. argyrol watery solution on a compress seems to completely check the pustulation. He has reached the stage several times of here and there a light form of granulation, and the blastomycetic condition has reappeared so as to almost cover the whole area again. He complains of a great deal more pain than he suffers, because he is an old man, and if neglected he suffers intensely. It is hard to estimate his actual pain. He sleeps well. I have run the gamut of almost all treatment, as related in my report to the American Dermatological Association last year, yet the patient does not get well, although he is in good physical condition. The present lesion circles two-thirds of the lower third of the leg and is about two and a half inches in its widest diameter. Originally he had six areas on his body, but this is the only one that remains. I have had him under care for a little over two years.

Dr. M. L. Heidingsfeld, Cincinnati—I had not intended discussing this paper, because my views in regard to this subject are somewhat dissimilar to those of most of my confrères here assembled, had not Dr. Dyer's case recalled an exact parallel case of my own. The ulceration is of nine years' duration, in a young girl of 13, and occupied one-third of the left leg when I first saw the case a year ago. It conforms very closely to the clinical description of blastomycetic dermatitis and has been exceedingly obstinate and refractory to the most varied treatment. Compresses of a solution of picric acid have yielded the best results, and the ulcer is now considerably diminished in size. My diagnosis inclines to chronic ulceration, following some unknown form of infection, possibly emanating from a tubercular periostitis. My skepticism forbids me to make a diagnosis of blastomycetic dermatitis, although I must admit that it has been materially diminished by Drs. Hyde and Montgomery's interesting demonstrations before this body, two years ago. I wish to correct any false impression relative to the stand I took at that time. I have never questioned that these double-contoured bodies are readily found in these affections, that they germinate and can be readily cultivated: what I do question, until more conclusive evidence is adduced, is that they are pathogenetic. I regard them merely as contaminations, symbiotic products, if you wish, yeast or fungous growths, as a rule present in many forms of affection, but particularly favored in this class of affections by the natural conditions of heat, moisture and good culture media.

Dr. Isadore Dyer, New Orleans—As a matter of interest I would say that the pathologist at the Charity Hospital, referring to some specimens I had sent in for examination, made the remark that he commonly found the yeast fungus in epithelioma. I asked him why he did not report it, and he said it was so common that he did not think it of sufficient importance to take into consideration. I assured him I believed it of sufficient importance to receive attention.

I always feel like apologizing when I go before a body of men in skin diseases, because I am purely clinical in my ideas and in my practice. I believe still that the clinical entity of the so-called blastomycetic dermatitis is the same as the condition which is called yaws. I have seen very few cases of yaws. When I first saw a case of blastomycetic dermatitis I stated my position. It makes no difference to me whether it is called blastomycetic dermatitis or yaws, but clinically it has the same evidences.

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[4] Anthony and Herzog: Journal of Cut. and Gen.-Urin. Dis., January, 1900.

[5] Gilchrist: Brit. Med. Journal, Oct. 25, 1902.

[6] Ophuls and Moffit: Philadelphia Med. Journal, Jan. 30, 1900.

Dr. Henry G. Anthony, Chicago—I have not time to go fully into my views, but originally I said that there were two cases on record at the time I reported my first case, which I was willing to accept as primary blastomycosis. Since then I have had an opportunity to see a considerable number of cases. Through the courtesy of Drs. Hyde and Montgomery I have seen most of their cases at the Chicago Dermatological Society, and I am now willing to add to the original two I picked out some others, but I still cling to the opinion I have always had that in a large number of instances these micro-organisms are secondary infections.

I wish to direct your attention to the fact that Dr. Montgomery has recently been in Europe, and within the last three months, in the *Annals of Dermatology and Syphilography* an article has appeared by Gaston, who says, addressing the French Dermatological Society: "In the name of Dr. Montgomery I desire to present to this society cultures and slides taken from cases which Drs. Hyde and Montgomery have observed in Chicago." He then proceeds with a description of the cultures and closes his article with this statement: "We can say with certainty that these micro-organisms are not artificially introduced into the lesion by the observers. The importance of these micro-organisms as an etiologic factor of disease is not determined. I have recently seen a case of sarcoma of the foot in which these micro-organisms were present. Whether they are really the cause of blastomycosis we do not at this time know." Gaston presented the subject, not as Dr. Montgomery presents it, but just as I presented it in the beginning of this discussion, two years ago. Gaston seems to be skeptical regarding the Ormsby case. I am not. Every possible care was taken in that case to detect tubercle bacilli, and they were not found, and if that case is not tuberculosis, what is it but blastomycosis?

Dr. John A. Fordyce, New York—The fact has often been commented on that cases of blastomycetic dermatitis have not been observed in the east. We have seen cases similar to this type where a clinical diagnosis of blastomycetic dermatitis was made, but we have been unable to find this organism either in sections or culture media. I have seen at least six or eight cases that clinically resembled blastomycetic dermatitis, but could not demonstrate the fungus.

In the cases of systemic infection reported by Drs. Hyde and Montgomery the relationship of the organism to the affection is clearly established. It is, however, a debatable question whether all the reported cases in which the fungus has been found are due to its presence.

Dr. A. W. Brayton, Indianapolis—In my second case, a woman about 23, the lesions were scattered along the hand and there were some infected papules. There was an affected area as large as a quarter over the finger, and there was an autoinfection producing lesions of different shapes and sizes on the ulnar surface of the palm. The yeast plant was found in all the lesions, regardless of their size.

Dr. Newton Evans, Battle Creek, Mich.—As to the question of pain, in my experience, and in the literature at my command, pain does not seem to be an important symptom; most of the patients have been without pain to any marked degree.

The question was asked as to recent cases. In my report I refer to a case which occurred in Chicago, reported by Ormsby and Miller. This was a case of systemic infection. There has also been one lately reported in the *British Medical Journal* by Gilchrist. The patient was a negro with extensive involvement of the skin and lymph glands.

As to treatment, Dr. Hyde has recently suggested the x-ray in treating these lesions in addition to the systemic treatment with iodids. In the case I reported the actinic ray was used with the result of holding the growth in check and decreasing the number of miliary abscesses. As soon as the treatment was discontinued it began to spread rapidly by peripheral growth. The growth was afterward excised.

As to the identity of the disease and the etiologic relation of the parasite to the disease, personally I have little doubt on the subject. In the case of systemic infection referred to in our paper there was no doubt at all that the lesions were composed almost entirely of the parasite, and in the cases of localized infection it seems to me there is little doubt about the etiologic relation of the micro-organism.

PSEUDOHYDRONEPHROSIS.

PARANEPHRIC CYST OR HYDROPERINEPHROSIS IN A BOY OF THREE AND ONE-HALF YEARS: OPERATION: RECOVERY.*

S. W. KELLEY, M.D.
CLEVELAND, OHIO.

HISTORY AND EXAMINATION.

S. S., a boy of 3½ years, weighing 29 pounds, was brought to me July 30, 1902. His parents, Jewish people, gave me the following history:

He had always been well until seven weeks previously when he was run over by a wagon in the street. They said there was no visible injury excepting bruises about the head, and yet he seemed to be severely hurt. He was carried into a nearby hospital and kept there a week, then brought home. Two weeks after the injury the parents noticed that his abdomen was swollen, bulging out to the left of the median line and half-way between the umbilicus and the ribs. This swelling gradually increased during five weeks until the present distended condition was reached. They said the size of the abdomen varied slightly at different times, which they attributed to the quantity or quality of his food, as he sometimes bloated with gases. They did not think he was larger than two weeks previously.

The boy's appetite was poor. He had vomiting spells every few days. They said he swallowed with difficulty, the food or drink sometimes regurgitating.

He had a very annoying, husky cough. He suffered from indefinite pain and distress in his stomach, abdomen and side. Never appeared feverish or chilled nor had sweats.

On examination I found the little patient so very peevish and fretful that I could not count his respiration or pulse with any satisfaction. The temperature was normal.

The bulging of the abdomen was perceptible over the whole left side down to the left inguinal region. It occupied the left lumbar, the umbilical, left hypochrondriac and epigastric regions. The largest circumference of his body, which was one inch above the umbilicus, measured 22 inches. The skin was tense, but not discolored.

The tumor felt smooth and rounded, and on percussion was dull, and fluctuating. It appeared to be so distended with fluid that I tried to make out translucence with transmitted light, but failed to do so. In the photograph (*Fig. 1*) taken at this time, the dark shading indicates the outline of the percussion dulness.

On trial he swallowed water very well, but they told me he could not always do so. I passed a stomach tube without any unusual difficulty, but withdrew only a small quantity of half-digested food. I wished to fill his stomach with carbonic acid gas, but he was too fretful and unruly.

Examination per rectum revealed nothing. I could not feel up to the tumor. Could not detect anything abnormal about rectum, bladder or ureters.

The boy looked ill and was losing flesh.

I advised liquid nourishment of little bulk, and prescribed intestinal digestants and antiseptics, with the idea of relieving the abdominal distension as much as possible. I advised having his urine measured and a sample brought. They brought me 6 ounces, the whole quantity for twenty-four hours. The urine was rather dark colored; specific gravity 1,024; strongly acid; showed many crystals of calcium oxalate and of uric acid, and numerous motile bacilli.

DIAGNOSIS.

Passing in mind the possible conditions which might cause a large fluctuating collection in this region, I thought of nephric or perinephric abscess, pyonephrosis, *ovarian cyst* and ascites, cyst of the pancreas or of the spleen, or of the kidney or its coverings, and hydronephrosis.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

Ovarian cyst was barred by the sex, and general ascites by the circumscribed area: abscess by the absence of chills and fever.

A splenic tumor bulges toward the front more commonly than toward the lumbar region.

A cyst of the pancreas may grow as large as a patient's head, pressing forward in the epigastrium and downwards, and causing regional pain, disturbance of the stomach and intestinal indigestion. If thin walled, as a cyst of rapid formation is apt to be, it fluctuates. All these symptoms were present and, although there was no diabetes, that is not a constant symptom of pancreatic cyst.

But this tumor, although it filled the pancreatic region, extended so low in the abdomen, and especially back into the lumbar region where a pancreatic cyst does not extend, that it seemed more likely to spring from the kidney or its cellular coating. Pancreatic cyst must be exceedingly rare if, indeed, it ever does occur in children.

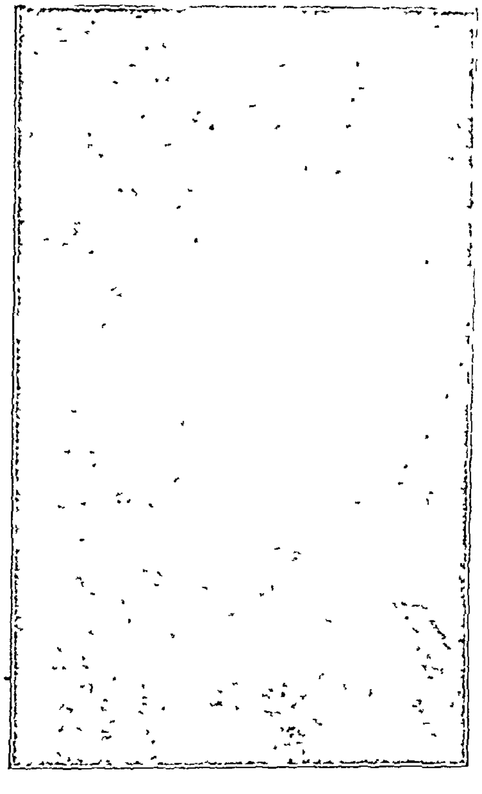

Figure 1

There was no bruit in this tumor, nor any pulsation.

A cyst in connection with the kidney may be, according to the accepted classification, a congenital cystic metamorphosis of the kidney, a cyst of the perirenal cellulo-fatty tissue, or a dilatation of the pelvis of the kidney, hydronephrosis.

The child had given no evidence of disease up to the present illness as would surely have been the case with fetal or congenital disease or malformation.

Hydatid cyst is extremely rare.

So the diagnosis was narrowed down to either paranephric cyst or hydronephrosis, although there was no history of occasional evacuation of large quantities of fluid per urethram, as sometimes confirms the diagnosis in hydronephrosis or cysts of the kidney connected with its pelvis.

However, it should not be forgotten that a sarcoma may be cystic, too; or that the elasticity of a rapidly growing sarcoma might be mistaken for the fluctuation of a cyst. A sarcoma has been known to attain enormous proportions in six or seven weeks.

As to whether a cyst of this region is sarcomatous or hydatid or distends the covering of the kidney or is formed by expansion of its pelvis may be impossible to distinguish during life.

PROGNOSIS.

Prognosis in hydronephrosis or cyst depends on the treatment adopted. Spontaneous discharge through the ureter, although it has in some cases occurred, is not to be waited for. Discharge may take place into the peritoneum, or through the pleura into the lung, or suppuration may occur, or gradual exhaustion of the patient.

With operative interference the prognosis is good, although there is a chance of leaving a renal fistula.

TREATMENT.

But this accumulation being present, whether a hydatid cyst, a paranephric cyst or a hydronephrosis, the indication is to remove it. Medical treatment is useless. Manipulation or friction has sometimes been advised in such conditions, but seems perilous where there is so much distension.

Aspiration is the treatment usually laid down in the text-books, and cases are on record in which a single aspiration effected a cure, the fluid never reaccumulating. Sometimes several aspirations are necessary. How the cure is effected by aspiration in a given case it may be only possible to surmise. Perhaps by relieving pressure or reducing some kink or fold in the ureter. Of course, aspiration affords no opportunity to study the cause of the condition.

It is often advised to puncture where the tumor points if this is at a spot where the peritoneum is not likely to be met. If it does not point, the puncture is to be made so many inches below the ribs and above the iliac crest and so many inches from the spine. I object to having locations measured in inches. That is fallacious, as patients differ so much in size. The puncture should be made about half way between the last rib and the crest of the ilium and far enough from the spine to miss the edge of the sacro-lumbalis—not going so far forward as to wound the peritoneum. Usually dulness and, perhaps, bulging guides the operator to the kidney tumor, while a tympanitic note farther forward warns of the presence of the colon. In this case I would have resorted to aspiration, at least as a primary measure, but for the fact that occasionally on percussion a tympanitic note was elicited in this region, which made me fear puncturing the bowel. I had a theory that when the boy met the accident the kidney had been misplaced toward the median line, bending and occluding the ureter and causing hydronephrosis and that the colon lay close to the margin of the spinal muscles, sounding resonant when filled with gas and dull when empty and compressed against the tumor. I tried to test this by distending the colon with air by means of a bellows, but did not succeed in distending it at this point, the pressure from within being too great for safety.

OPERATION.

Nephrotomy was chosen rather than aspiration. This I did, August 10, at the Cleveland General Hospital. Made an incision about three inches in length in the left lumbar region, one rib width below and parallel to the twelfth rib, notching the sacro-lumbalis muscle and extending forward. This incision I preferred to the vertical in so small a child, in whom the space between ribs and iliac crest is very limited, and in dealing with a tumor the size of which might eventually require a much enlarged incision. The aponeurosis was much thinned by the distension.

There is no troublesome "packing" of fat around the kidneys in infants and young children. There was no bowel in the way, thus exploding my preconceived theory. On reaching the kidney at its lower end I punctured it and drew off 1500 c.c. (little over three pints) of fluid. I followed the trochar with a grooved director and this with a narrow knife and incised the kidney into its pelvis, enlarged this opening with the spreading scissors and explored with my finger. The pelvis of the kidney was not very large, not twice its ordinary size, and certainly not greatly distended.

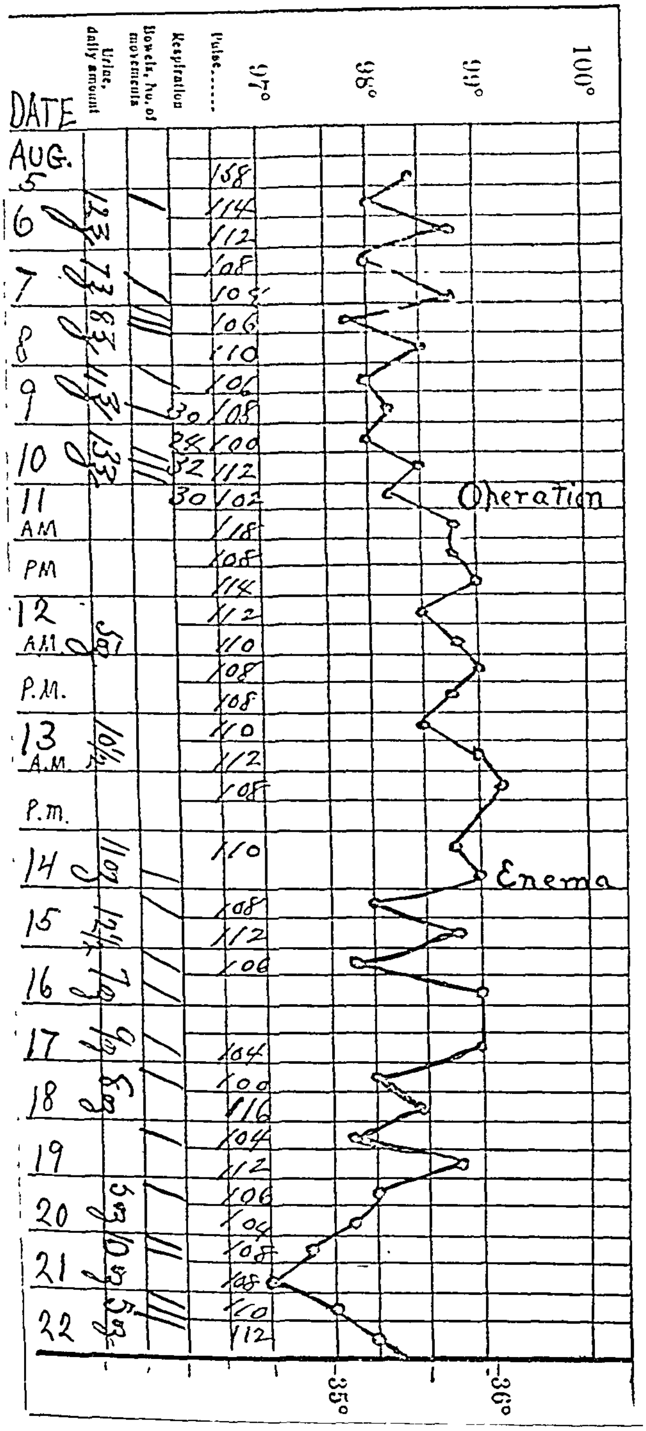

Figure 2.

It is advised in the books to explore the pelvis of the kidney for an obstruction of the ureter. The pelvis contained no calculus nor clot nor growth that was palpable. But, as for exploring the ureter, I could not even be certain of feeling the opening of the ureter; and as for passing a probe or bougie through the wound in the kidney upward in its pelvis and then downward into the ureter, I found it practically impossible. Nor did I detect the opening connecting the pelvis with the cavity of the cyst, although one must have existed, for the cyst emptied itself when the kidney pelvis was tapped.

We know that a paranephric cyst, or, as some authors term it, pseudohydronephrosis, may, in fact usually does, have an opening into the pelvis of the kidney or the ureter.

Parenthetically, I would like to remark that of the two names for this condition, paranephric cyst or pseudohydronephrosis, I prefer the latter. But would suggest that such collections of fluid of traumatic origin, in the retroperitoneal connective tissue and opening into the pelvis of the kidney, should be called "hydroperinephrosis," to distinguish them from the paranephric cysts, which are congenital or of unknown origin, developing in the perirenal cellulo-fatty tissue. I am not in favor of complicating our nosology unnecessarily, but it seems to me this distinction is appropriate, for such a collection more resembles that of hydronephrosis than of congenital cystic kidney, of the hydatid cysts, or of the paranephric cysts, with which it has usually been classified, and it indicates the location of the cyst better than the term pseudohydronephrosis. Hydroperinephrosis would be the connecting link between hydronephrosis and the paranephric cysts.

Continuing the operation, I stitched the margin of the kidney wound to the margins of the external incision and put in a rather large drainage tube—perhaps one-half inch in diameter, packed around with iodoform gauze—then sterile gauze, cotton and binder. Urine discharged freely through and around the tube, the accompanying chart shows the conditions during the five days preceding and the week after the operation. When the child first came to me he was passing only five to six ounces of urine daily. This scarcity I attributed in part to his taking such small quantities of fluid, through his fear of swallowing, his general apathy and anorexia.

While under observation in the hospital, his digestion having been improved and his general condition made more comfortable, he passed from seven to thirteen ounces of urine daily. After the operation (skipping the first three days) the quantity of urine did not change very much until the wound was allowed to close, when it increased so that when dismissed with his wound healed on September 2 he was passing from twenty to twenty-four ounces daily.

The fluid removed from the cyst was examined by my student, Mr. I. I. Yoder, who reported as follows:

Amount: A little over three pints, or 1,500 c.c.
Color: Light chocolate.
Sp. gr.: 1.013.
Sediment: Abundant, 2/5.
Reaction: Slightly alkaline.
Albumin: Very heavy precipitate; nearly 3/5 on subsiding.
Urea: 5.76 grams in 1,500 c.c. of transudate, or 0.38 per cent.
No amylolytic ferment.
Microscopic: Blood corpuscles; numerous motile and chain bacilli; uniform spherical masses of a species of large micrococcus and a few cholesterin crystals.

The boy has remained well ever since. Although he grew fatter and heavier, his abdomen measured only eighteen inches.

THE TREATMENT OF VASCULAR TUMORS BY THE INJECTION OF WATER AT A HIGH TEMPERATURE.

WITH SUGGESTIONS AS TO ITS EMPLOYMENT IN TUBERCULAR ADENITIS, ABSCESS, FISTULOUS TRACTS, ETC.[*]

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NEW YORK.

Angiomata or non-malignant vascular tumors, especially those of large size, as cirsoid aneurisms or cavernous nevi, are among the most difficult lesions with which the surgeon has to contend. In fact, a considerable number of these cases have heretofore been deemed inoperable, and have been abandoned to an ever-increasing deformity and discomfort and, in some instances, to death from hemorrhage, pressure or other cause.

While I do not claim that the method I am about to submit is infallible or will cure every case, or is without danger, I am convinced it is worthy of serious consideration.

These vascular neoplasms may be classified on an anatomic basis as arterial, capillary and venous. The arterial angioma, or cirsoid aneurism, is most infrequently observed. The venous variety (cavernous nevus) is next in order of infrequency, while the capillary form, or "mother's mark," is most common.

In 1900, attracted by the success which my colleague, Prof. R. H. M. Dawbarn of New York, had achieved in his operation for the starvation of inoperable tumors of the nasopharynx by dissection of all those branches of both external carotid arteries which are distributed to the regions involved, I began experiments to determine if this might not be accomplished by a simpler method, which would bring the operation within the scope of many practitioners who might hesitate to undertake such an extensive dissection in one of the so-called dangerous surgical regions. The idea in mind was to obliterate the terminal branches of the external carotid arteries by injecting into the lumen of the parent trunk below the points of origin of these branches, paraffin, alcohol, or some other substance which would cause occlusion of the vessels and render the denutrition of the tumor less difficult and more thorough.

The experiments were made on the arteries of dogs, and the substances employed were paraffin, alcohol and boiling water. Neither of the first two proved satisfactory, while the injections of water at the boiling point into the iliac of a dog caused immediate occlusion of the vessel and all of its branches. This result convinced me that with this agent the coagulation of the blood and albuminoids in vascular neoplasms was possible. The first operation was made in the following case, which had been abandoned as incurable:

Miss V. D., aged 20, consulted me in 1897 for a large cavernous nevus occupying the right lower jaw and chin and a portion of the neck immediately underneath the chin and jaw of the right side. (Fig. 1.) The tumor was congenital, had increased in size progressively with the development of the patient during her growing period, and had continued to enlarge after she had reached her full growth. Pressure of the mass had worn away the outer surface of the lower jaw, and an extensive network of enlarged veins could be seen beneath the mucous membrane of the buccal wall. The skin covering this mass of blood vessels was normal in color. She informed me that the late Dr. Hunter McGuire, Richmond, Va., had essayed to remove the tumor by operation, but had abandoned it on account of hemorrhage. I repeated this effort, proceeding very cautiously, but was convinced from the extensive bleeding which followed a very small incision that the patient would perish if I persisted in the effort. The wound was packed and firm compression applied, and as soon as her condition permitted she was allowed to return home.

On July 14, 1901, under ether narcosis, an area covering one-third of the tumor was injected with from two to three ounces of boiling water. To preclude as far as possible the danger of embolism, peripheral compression was applied. With the distension of the tumor the integument became very warm to the touch, and at one time there was sufficient heat to cause my assistant, who had two fingers inserted into the mouth, to remove his hand. The medium aspirating needle was carried through the mass to within one-half of an inch of the limit of the diseased area and the boiling water forced out of the syringe until the integument turned pale under the distension. Notwithstanding the great heat there was no necrosis of the mucous membrane or the overlying integument.

The operation lasted ten minutes, and there was no pain or elevation of body temperature at any time after the patient became conscious. The blood and albuminoids were evidently coagulated. Within two weeks the area injected had diminished at least one-half in size, when a second operation was performed. At this time the injections were made through the entire remaining portions of the mass with a result equally as gratifying as at the first procedure. At the end of the second week, when the patient left me, the tumor had diminished two-thirds its former size. A third injection of a small area which had escaped coagulation was one year later performed by Dr. Stuart McGuire, Richmond, Va., with success. The accompanying photographs show the gratifying results in this case. (Figs. 2 and 3.)

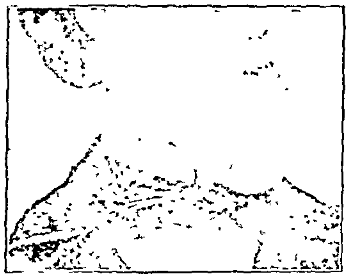
Fig. 1.—The angioma before treatment.

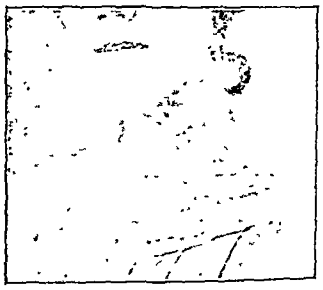
Fig. 2.—After the first and second injections.

Case 2.—A second and more difficult case of this form of angioma is that of C. G., a well-developed child of 9 years, of Lowell, Mass. At birth there was a small "mother's mark" or blue spot, about as large as a quarter of a dollar, on the back just above the right shoulder blade, a little to the right of the median line. At the age of 2 years it began to grow perceptibly, and continued to enlarge in all directions, drifting chiefly downward and to the right. In her fifth year, when the tumor was about seven inches in length and half as wide, an effort was made to remove it by operation, but on account of hemorrhage it was abandoned. The wound was packed, became infected, and resulted in the cicatrices which are shown in the photograph. The neoplasm reappeared in all parts of the operative wound, and one and one-half years later a second attempt was made, and this was also abandoned.

When she came under my observation, on Feb. 27, 1902, there was a large venous angioma occupying the back from the edge of the trapezius muscle above the right shoulder blade, over the shoulder, reaching to the middle line between the two scapulæ, then down along the posterior border of the right scapula, extending as far as the twelfth rib and well forward to the right side. The whole mass was slightly crescentic in shape, its surface was from one to two and a half inches above the level of the body, and from the elevation of the right shoulder it was evident that the abnormally enlarged vessels had burrowed between the ribs and the scapula. To the touch it was soft and compressible, the venous channels remaining empty under pressure and refilling as soon as this was removed.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

Under ether narcosis the boiling water injections were made as in the former operation, the needle being inserted in eleven different points through the neoplasm. Between five and six ounces of boiling water were thrown in. The child complained of no pain after consciousness was restored. Coagulation was evident, and within two days the area injected began to undergo diminution by granular metamorphosis. By October the entire growth had disappeared with the exception of the rounded mass, about three inches in diameter, and elevated about one and a half inches above the skin, shown in the center of the area in black in the accompanying illustration. (Fig. 4.) This was injected in October, 1902, which completed the cure.

In the first operation in this case a necrosis of the skin over an area of about one inch in diameter resulted from hyperdistension with too much boiling water at this particular point. After the child left my care and returned to her home in Massachusetts this became infected and some suppuration ensued, but it in no way interfered with her recovery and the cure of this large and otherwise incurable growth.

The method has been successfully employed in arterial angioma, or cirsoid aneurism, as shown by the following case:

Case 3.—Miss S. C., aged 27, came under my observation January, 1902. In 1885 the patient noticed a small pulsating tumor in a branch of the temporal artery situated directly over the ear. Compression on the artery in front of the ear by means of a cork held in place by bandage tied around the head was tried for a prolonged period. While it controlled all pulsation as long as the pressure was applied, it did not obliterate the artery or cure the angioma.

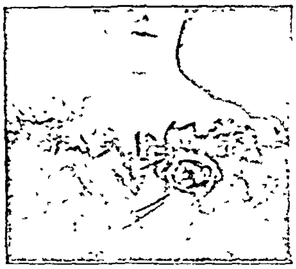


Fig. 3.—After the third injection.

In 1886 Dr. J. M. Taylor tied the temporal artery in front of the ear, but without benefit, for after this operation the tumor increased in size. In 1887 Prof. T. G. Richardson, New Orleans, attempted to strangulate the mass subcutaneously, but without success. At a later period he introduced several large pins through the base of the tumor and surrounded it with a strong ligature. By repeated tightening of the ligature he succeeding in cutting off by strangulation a considerable section, to the base of which caustic potash was applied. The tumor, however, continued to grow, and although this attempt was repeated a year or two later by Dr. Richardson, it failed again, and any further operation was abandoned.

In January, 1902, there was a large pulsating mass covering about one-half of the left side of the scalp, which measured approximately five by six inches and was elevated above the level of the normal scalp from one-half an inch to an inch. On the surface there were several large cicatrices which had resulted from the efforts of strangulation, and along the border of these scars were three or four small patches of papillomata. Leading into this tumor were five arteries, which could be seen distinctly pulsating with increasing motion as they approached their entrance to the mass. Two of these came from the left temporal, one from the right temporal and one from each occipital. The center of the angioma corresponded to the point where pulsation was first noticed. It had grown so rapidly within the year that the patient was compelled to seek relief by operation, which was done on Jan. 4, 1902, under ether narcosis, the scalp having previously been shaved and thoroughly disinfected.

The needle was entered along the course of the arteries leading into the tumor, beginning about two inches from the mass, a quantity of boiling water sufficient to coagulate these vessels being employed. It was then introduced through the tumor from side to side, injecting about a dram, withdrawing the needle for one-half of an inch and then repeating this procedure until the entire mass had ceased to pulsate. The quantity of boiling water so used was between five and six ounces. Temperature on the surface was noticed by touch, and when the heat became very perceptible to the hand and the skin began to bleach the injections in that particular area were discontinued. The warty growths noticed on the surface of the scalp were touched with the Paquelin cautery. No reaction followed the operation. The patient complained of no pain, but there was a very considerable edema of the scalp, and this, beginning on the left (the side of operation), closed the left eye and spread over the face, closing the right eye within forty-eight hours. The swelling spread as far down as the neck and was so great that had I cause to repeat a similar operation I would use only about one-half the quantity of water, and would then repeat the operation after the interval of about a week.

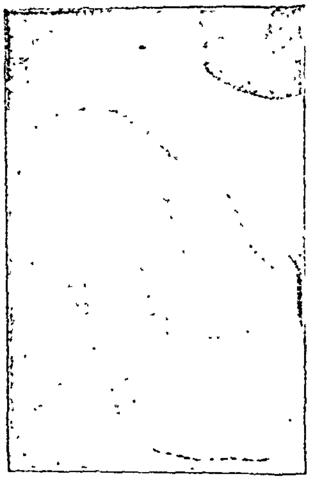


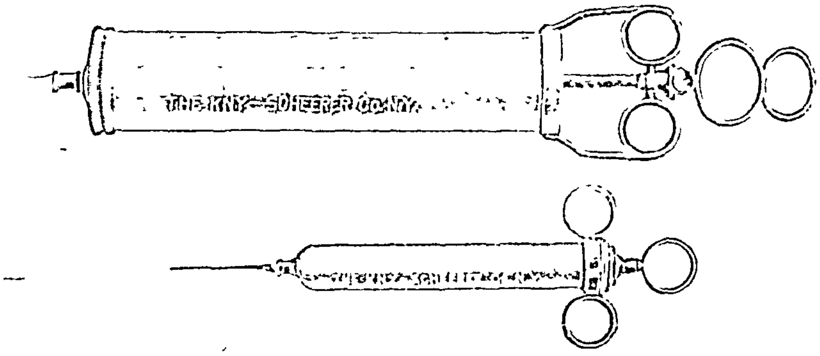
Fig. 4.—After the second injection.

Dr. G. C. Chandler of Shreveport, La., a brother of the patient, writes me under date of Nov. 12, 1902, that "no pulsation is present, and there is slight depression where the tumor was, owing to attrition of the skull by the long pressure of the pulsating mass. The scalp is no thicker than that covering the normal skull, and while a slight eczema persists where the tumor was situated, the hair seems to be more plentiful than before the operation."

I have employed this method successfully and without accident in a number of cases of capillary angioma, but, on account of their superficial character, they being within the substance of the integument, some cicatrization is apt to result unless very great care is taken. The weak tissues of the new growth do not offer the resistance of the normal skin which overlies the venous or arterial angiomata, and may break down under the hot water. In all of my cases the scarring has been very slight, and I think the method is well worthy of thorough trial in these cases. As they occur chiefly in children and are situated on the face, it is important to have the patient very firmly held while the injections are being made without narcosis. The legs, arms, body and head should be kept immovable, while the face should be covered by a mat in which an aperture is cut sufficient to expose the area to be injected. I take the additional precaution to have an assistant hold a sponge saturated with cold water immediately over the needle in order to prevent scalding the cuticle should the apparatus leak. The small hypodermic needle is used, and this should be thrust through the sound skin, about one-eighth of an inch from the edge of the angioma, pushed beneath the neoplasm, care being taken not to let the point come through the surface. From five to fifteen minims of water may be injected in one spot, changing the needle here and there to suit the size of the mass. When the injections are made directly into the enlarged capillaries, necrosis almost always occurs, but if the water is forced well beneath the surface, the deeper parent vessels will be coagulated, causing the nevus to disappear by gradual denutrition (granular metamorphosis). It is a wise precaution to cover the area injected at once with aseptic collodion to prevent infection. This operation may be repeated from time to time until a cure is effected.

Water at a high temperature will without doubt become more frequently employed in the treatment of various minor surgical diseases. It has already been employed by Dr. Lucien Lofton of Virginia in the treatment of hemorrhoids, and, while I do not approve of the treatment of hemorrhoidal tumors by injection, always having in mind the danger of hepatic or other embolism, if, in the judgment of the surgeon, this operation is deemed advisable, hot water is the safest agent.

It has been employed successfully in the treatment of fistula about the rectum. When there is, as most frequently exists, only an external aperture with no communication with the cavity of the rectum, boiling water injected so as to be brought in contact with the entire surface of the fistula and abscess should destroy all septic organisms and effect a cure.



Figs. 5 and 6.—Injection syringes.

The late Dr. Ackard,[1] Springtown, Texas, reported to me a number of cases in which he had cured fistulæ by this method. It is my intention to give this method a thorough trial in the treatment of tubercular adenitis, preferably before pyogenesis, and I shall not hesitate to employ it in gonorrheal bubo, in ranula,[2] in small cysts, and abscesses and lipomata.

I have used the method in one case of very large inoperable sarcoma of the shoulder and scapula, using more than a pint of boiling water. The operation was followed by extensive sloughing, with improvement of the patient's general condition, but without curative effect, and, while he is still living, I do not think he can long survive his malignant disease. I have had numerous inquiries in regard to the application of this method to uterine fibromata, but my reply has invariably been that hysterectomy was the better procedure.

DISCUSSION.

DR. WILLIAM J. MAYO, Rochester, Minn.—While I was in New York last November I visited Dr. Wyeth's clinic and had the pleasure of seeing two of the cases reported here-to-day. One of them was an enormous angioma, which I do not believe any of us would have felt like taking out by the knife. I was very much impressed with the result and asked Dr. Wyeth to send me an apparatus. In a very short time we had a large venous angioma of the cheek of a young man. To have removed it with the knife would at best have meant a very bloody operation and probably sacrifice of the seventh nerve. With this apparatus one and one-half ounces of boiling water were injected into the tumor, and it promptly coagulated, and in two or three weeks two-thirds of it had disappeared. I have since heard that the growth is almost entirely gone. None of us desire to employ excision in these cases when we can help it, and I was struck with the ease with which this method can be used and the almost certain results. I believe it is one of the advances in the treatment of tumors of the blood vessels.

DR. JOHN P. LORD, Omaha—Modern surgery some years ago attempted to accomplish almost everything, and, therefore, some of the old injection methods of the masters were abandoned, and probably they have not been practiced for several years until recently. Last year I had a case to treat very similar to that described by Dr. Mayo. This nevus so involved all the structures of the cheek that its removal would have necessitated the sacrifice of the mucous membrane of the mouth, so that to remove it by surgical measures would have been absolutely out of the question. The use of electrolysis and the Paquelin cautery seemed to afford no adequate relief. I therefore determined to treat by tincture of iodin injections. In looking up this subject, I found that most of the accidents reported by the older surgeons were due to embolism. Pilchner of Brooklyn observed that in the cases in which accidents had occurred by this method no precaution had been taken against the formation of embolism. I, therefore, took the precaution to cut off the circulation from the outgoing vessels by finger pressure, and the result was all that could be desired. It was very simple in its application. The results were very rapid. In the course of a few treatments, I had accomplished more than I had by the numerous other methods employed. About this time this method of Dr. Wyeth's was published. I have not used it, but I believe that it has a very large use, and I believe also, that we can use safely, in proper locations, the injection of other coagulating agents.

DR. RICHARD H. GIBBONS, Scranton, Pa.—I have seen Dr. Wyeth perform this operation in several instances, and I have seen this remarkable case of monstrous angioma, which he removed entirely by this method, and it makes me feel that the procedure is one of the very greatest value to the profession. It would be very painful to remove by the knife most of these monstrous angiomata, and in many cases it would be absolutely impossible, but they can be safely removed by this method. I believe that this method would be of value in fibroid and other tumors of the uterus. An opening could be made through the vagina; we could ascertain the proper place, make the puncture and then inject the hot water. Later an incision could be made higher up and the tumor exposed and injection made in this region in the same manner, which would doubtless render the patient more comfortable than any other application or treatment.

DR. JOHN A. WYETH, New York—In regard to the employment of any apparatus for the registration of heat, I think it scarcely practicable. The operator should judge by the sense of touch and by the bleaching of the skin as to the proper degree of heat and tension. In choosing between the hot-water injections and excision by the knife one must be guided by the conditions which are present. Where the angioma is small and the skin deeply discolored, if excision can be practiced so as to remove the deformity and leave only a linear cicatrix, this operation would be preferable. But where mucocutaneous margins are involved, injections should be carefully and thoroughly tried.

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[1] Dr. Ackard accidentally discovered the efficacy of hot water in the treatment of fistulæ. In irrigating a fistula, by a mistake of his office boy, the syringe was filled with water almost at the boiling point, with which he flushed the fistulous tract. The patient suffered great pain from the application, but the fistula was cured. He repeated this in a series of cases under chloroform narcosis with success.

[2] I have recently employed this method in a very large ranula with entire success.

BUT ONE PROFESSION OF MEDICINE.*

DUDLEY S. REYNOLDS, A.M., M.D.

Member of the American Association for the Advancement of Science, the British Society of Arts, etc.

LOUISVILLE.

It may be fairly claimed that, prior to 1880, the medical profession embraced the regularly educated regular physicians, the regularly educated homeopathic physicians and the regularly educated eclectic physicians. Infinite varieties of each of these classes, representing all manner of individual peculiarities, were to be found in every community. There were those claiming the inherent hereditary power of healing the sick or some mysterious gift from the Creator of the universe to dissipate disease. Then we had the Thompsonian, the Baunscheidt systems, *et id genus omne*. In most states any person desiring to engage in the practice of medicine might have his sign painted, issue his cards or publish his announcement in the newspaper and proceed at once to invade the ranks of the credulous. In some places a local license tax was exacted. All this has been changed.

The work of the Association of American Medical Colleges has, through the encouragement and support of the medical societies, brought about a better understanding by the general public of what constitutes the necessary qualifications of a physician. In most of the states laws have been enacted defining these qualifications, or creating a board of experts for that purpose. This has aroused the sectarian schools of medicine to a realization of the necessity for systematic education in the fundamental subjects of the medical curriculum. Now all schools teach the same anatomy, histology, physiology, pathology, chemistry, toxicology, materia medica and therapeutics, with no pretense of any difference, excepting in some special features of materia medica and therapeutics. In fact, nearly all of them use the same text-books.

State examining boards all require a definite knowledge of anatomy, histology, physiology, chemistry, pathology, toxicology, hygiene, principles of medicine and surgery, obstetrics and medical jurisprudence, of every candidate for license to practice. Those claiming to practice peculiar systems are, in addition to the subjects named, examined on the subjects of materia medica and therapeutics, as taught in the sectarian schools. The truth is, these are subjects nearly identical with what is taught in the regular schools, so that now the sectarian physicians are, nearly all of them, alumni of regular schools, or at least trained from the same text-books in use at the regular colleges.

Education must have its refining influence even on the crudest material, and it has been nowhere more clearly manifest than in the ranks of the profession of medicine.

By agitation and by organized effort it has now become one of the fixed requirements of all applicants for admission to the classes of a medical school, whether sectarian or regular, that the student must possess a good English education, embracing rhetoric, Latin, mathematics and physics. This is exacted by both the colleges and the state examining and licensing boards. If the student is not a graduate of some high school of the first class, or some college or university, he must pass an examination equal to that required of common school teachers of the first class, or submit to an examination by some legally authorized examining board.

Some of the colleges and universities now require of all students of medicine before matriculation an A.B., B.S. or equivalent degree from a first-class literary college or university.

Step by step the advancement has been made until now a higher standard of scholarship is exacted of the medical student than is required of those entering on the study of any of the other professions.

The ethics of all the educated classes of people distinguish them from each other, as well as from the unlearned, and we may now find but little ground for dividing the medical profession into separate classes. Sectarianism fades before the broadening lights of a uniform course of systematic education, just as the refining process of analysis separates the pure gold from the adulterating deposits of earth in which the crude ore is found. It has already come to pass that no sectarian claims are made by the physicians of Evansville, Ind., and must soon be so everywhere, the sole test being educational qualification. Education just as certainly creates ethical regulations for individual deportment as it broadens the sphere of intellectual activity. With the general recognition of these facts all opposition to ethical rules vanish.

If the medical profession is not now a confraternity it soon will be. It is certainly reduced to a common plane as to collegiate training and legal exaction, and it has so far advanced in the growth of knowledge as to be at once conspicuous in the intellectual pre-eminence of its teachers and practitioners.

To assist in this great work of advancement the profession itself must be organized. The recently adopted plan of the American Medical Association to have all the states organized with their auxiliary county and district societies, provides a broader and better field for the continuation of our further development in those channels of scientific knowledge which experimental research alone may unfold to us. Laboratories for experimental tests are every day opening to us some of the mysteries of pathology and laying the sure foundation of new therapeutic procedures. The Roentgen rays of electric light came from the experimental laboratory to aid us in the diagnosis of internal growths, the dislocation of fractured bones, the presence and location of foreign bodies hidden by the flesh of our bodies; and, later, to melt away malignant growths on the surface and within the body. Hundreds of other blessings to humanity have resulted from the community of experimental science.

We never ask what political, religious or other opinions are held by the doctors of medicine. The great question is this, has he a systematic and duly accredited medical education? Has he been lawfully admitted to the practice of his profession? Now, as physicians, we may ask, does he possess a collegiate degree from a first-class medical school, and is he disposed to observe those ethical rules our organized societies have established for the observance of the members, and will he unite with us in our attempts to uphold and maintain the honor and dignity of the profession as a body?

We are one profession in spite of any number of protesting individuals. We are one profession by virtue of our community of interest, occupation and educational training. We are one profession by virtue of our lives of devotion to a common cause.

Our great advancement has been brought about by the labors of those who limit their work to some special field of practice and those who labor in the laboratories.

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* Read to the Kentucky State Medical Society, at Louisville, April 23, 1903.

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OUR INDEX NUMBER.

The Index in this issue is, we believe, an advance on previous ones, both in completeness and accuracy. It contains in its Current Medical Literature department not only the titles of American, but of foreign articles, including nearly all the leading papers published both in this country and abroad. It will, therefore, continue to prove a convenient reference aid to those doing literary work in medicine. A separate copy of the Current Medical Literature Index will be published with a reproduction of the titles as given in the separate numbers, thus affording a convenient and easy method of reference to the medical literature of the world for the past six months. Copies of this can be obtained in separate form with paper covers for 25 cents. We believe that this will prove a useful supplementary aid to everyone doing book work in medicine, and not be entirely supplanted by the *Index Medicus,* as it appears under its new auspices. Moreover, there will be a large number to whom the *Index Medicus* is not so readily available where this will be of decided advantage. We trust that our expectations as to its practical utility will be realized by our readers. The presence of the Index in this issue necessitates the abbreviation or entire omission of some of the various departments of the reading matter.

DISEASES OF METALS.

As so much has been appearing in the public press recently on the subject of "diseases of metals" and physicians are being questioned by the laity as to the nature of these diseases, as to whether or not they are actually "contagious" and (by the more naïve) as to whether or not microbes are to be regarded as the cause, The Journal is led to state briefly the facts in the case.

In 1851 Erdmann reported to the Royal Society of Sciences in Leipsic that he had observed a structural alteration of the tin in some old organ pipes from a church in Zeitz; the change in the tin, he believed, might be due to the vibration of the pipes in organ playing. Erdmann's observation remained unnoticed until 1869, when von Fritzsche, in St. Petersburg, called attention to it in connection with an important instance in his own experience. Some blocks of pure tin kept in a storehouse during the winter were found, on examination, to have undergone marked alterations. Some of the blocks were markedly disintegrated; others showed numerous gray, wart-like projections on the surface. Some of the blocks had actually fallen into powder and there were all transition stages between such an extreme structural alteration and the superficial wart-like change. The altered tin had a gray, dull color, in marked contrast with the white glistening appearance of the ordinary block tin. The gray powder, however, underwent a decided change on the application of heat; it decreased in volume and became much lighter in color, approaching that of block tin. The winter had been a very cold one, the temperature going to minus 38 C. It occurred to Fritsche that the change in the tin might be due to the low temperature; he, therefore, exposed some block tin to a temperature below the point where the mercury becomes solid and found, to his joy, that the tin underwent a structural alteration in all respects similar to that observed in the stored tin. In 1871 Oudemans, in Amsterdam, stated that a load of Banca tin, shipped in winter by railway from Rotterdam to Moscow, was found, on arrival, to have fallen to powder. The recipient suspected fraud.

Further observations in various places have shown: First, that great cold is not necessary for the transformation and, secondly, that the change occurs in pure white tin as well as in pipes composed of a large proportion of tin and a small proportion of other metals.

The whole matter has been explained by the experiments of two Dutch chemists, E. Cohen and C. van Eijk, who have demonstrated with great clearness the precise conditions under which white tin is converted into gray tin, and under which gray tin is converted into white tin, for the process is reversible. Equilibrium exists at 18.5 C.; below this temperature (its "inversion temperature") the gray form of the tin is the stable one, while the well-known white form is "metastable," that is to say, is in a condition comparable to that of a supersaturated solution of a salt, which, whenever possible and usually on the slightest provocation, will precipitate its excess of salt and pass into the condition of stable equilibrium. Since 18.5 C. (65.3 F.) is higher than the ordinary temperature of the air except in summer, it is obvious that all tin objects, such as are used by us in daily life, exist in a state of "metastable" equilibrium. Only on warm days, when the temperature is above 65.3 F., are they in a stable condition. It is very curious that if to a supersaturated solution of a salt a crystal of the salt itself be added, the "metastable" condition ceases at once, for the excess of salt crystallizes out as a result of the "inoculation"; exactly the same sort of thing happens with the "metastable" white tin, for if it is contaminated with a particle of the gray form of tin ("inoculated" with it) it passes over into the stable gray form. This happens at all temperatures below 18.5 C., though the change goes on with maximum velocity at minus 48 C.

When the process of transformation from white to gray tin is once started, the process goes on progressively and the conversion leads finally to total disintegration of the metal, hence the name "tin pest." The financial loss in such cases may be great, owing to the fact that the gray tin is likely to become oxidized, which makes it difficult to melt it up again; importers of tin are, therefore, advised to be very careful to prevent the access of the "infective" gray tin to their storehouses.

These facts are surely highly interesting in themselves, but they should also impress on us, as medical men, the great significance of the principle of equilibrium. If such marvelous changes in form and properties have been shown to be simply a function of the temperature, what may not happen when slight changes of temperature occur among the multitude of complex chemical systems represented by the cells and fluids of the human body. A host of reversible reactions doubtless have their inversion temperatures at or near the normal temperature of the human body; a rise or fall from the level of the normal temperature would then, like an automatically working "stop-order," turn the arrow in a whole series of equations in a direction opposite to that which it occupied before the change. The studies of fever which have already been made show clearly that a profound effect on metabolism is produced by an increase in body temperature; exactly to what that effect is due, and where it takes place must be left to the future and, in that future, probably to the chemist to decide.

THE THERMAL DEATH POINT

In *Science,* June 12, Mr. W. A. Setchell reports certain investigations he has made as to the upper thermal limit of living organisms, that is to say, the highest degree of heat in which active vitality exists. He has studied the fauna and flora of a number of thermal springs, and points out the precautions under which his investigations were carried on. The greatest care needs to be used in testing the temperature, as a distance of even a few inches may make an important change in the heat of waters owing to currents that are only perceptible to the thermometer. For this reason some of the earlier reported investigations can be criticised, and to some extent may be at least doubted. His findings are that no animal life exists in true thermal waters, that is, where the temperature is above 43 to 45 C. (110-113 F.), but certain low forms of vegetable life exist in waters of much higher temperatures. These all belong to the very lowest types, including the bacteria and chlorophyllose organisms closely allied to them, all being included in the group of plants known as schizophyta. Chlorophyllose organisms are not found in temperatures below 65 to 68 as a rule, though in some cases they have been found up to 75 to 77 C. (167-170.6 F.). The bacteria, however, endure the highest temperature observed for living organs, being abundant at over 70 and found in some considerable amount even up to 82 (179.6 F.) and 89 C. (192 F.), the latter being the highest temperature at which Setchell has been able to find living organisms. The organisms there found belong to the schizomycetes. The composition of the water appears to have something to do with the existence in it of vegetable life, as organisms seem to endure higher temperatures in silicic than in calcareous waters. No organisms whatever are found in springs having a decidedly acid reaction. The question naturally arises in regard to the character of the albumin of these organisms, what it may be that enables their protoplasm to withstand a temperature which coagulates the protoplasm and consequently kills the majority of living beings. The cell structure of the schizophyta is peculiar; it is quite different from that of other living organisms, and while the details are not satisfactorily settled, it seems that there is less differentiation, that is to say, less organization, in its structure than in other groups. "Whether we believe," the author says, "that the protoplast is all nuclear, or whether we believe that it is all cytoplasm, it remains clear that it is different from the protoplasm of other groups of organisms." There is room, therefore, for conjecture. There is nothing, so far as his own study is concerned, to indicate that the protoplast contains so little water as to render it incoagulable at the highest temperature it endures. He thinks there may be an "important difference in the essential proteids of the mixture or in the nature of constitution of the substance, a difference similar to that existing between a substance of the group of vitellins and one of the group of globulins." Whatever it may be, it is evident that the facts as ascertained do not diminish the mystery of living organisms.

Medical News.

CONNECTICUT.

New Insane Hospital.—The bill establishing a state hospital for the insane at Norwich, appropriating $100,000 for this purpose, was passed by both houses June 10.

Infectious Diseases.—During May 42 cases of smallpox were reported; 985 of measles; 2 of cerebrospinal fever; 268 of scarlet fever; 120 of diphtheria; 158 of whooping cough; 28 of typhoid fever, and 17 of consumption.

Physicians Fined.—Dr. Henry A. Carrington, Bistol, was found guilty of not reporting a case of scarlet fever, and was fined the costs of the suit, which amounted to about $10.——Dr. Thomas Mulligan, New Britain, was fined $1 for failing to report a case of measles and diphtheria.

Anti-Tuberculosis Campaign.—The opening and principal lecture in the crusade of the New Haven Medical Association against tuberculosis, was delivered by Dr. S. A. Knopf of New York City, May 29, on "The Duties of the People and of the Government in the Fight Against Tuberculosis."

May Mortality.—There were reported 1,264 deaths in May, 20 more than in April, 164 more than in May, 1902, and 156 more than the average for May for the past five years. This is equivalent to an annual death-rate of 16.7 per 1,000. Infectious diseases caused 23.5 per cent. of the total mortality.

Seasonal Diseases.—During the past five months pneumonia is remarkably conspicuous as the cause of a larger mortality than any other disease. In former years consumption has exceeded all other diseases as a destroyer of life, but in recent times pneumonia is rapidly taking the lead. In the present year, from January to May inclusive, the deaths from these two diseases were as follows: consumption, 570; pneumonia, 845. This changed relation of these two most fatal maladies is true not only of Connecticut, but generally in other states where vital statistics are carefully kept. One reason assigned for its prevalence is that people do not recognize its infectious nature and take no precautions to prevent its spread.

INDIANA.

Gives Hospital to Richmond.—Daniel G. Reid, formerly of Richmond, has offered to give the city a $50,000 hospital, on the condition that the citizens contribute $25,000 as the basis of a permanent endowment.

Resolutions on Dr. Eastman's Death.—At the recent annual meeting of the trustees and faculty of the Central College of Physicians and Surgeons, [illegible] ions were adopted regarding the death of [illegible] who was characterized as an "ardent promoter and faithful supporter" of the college.

Personal.—Drs. J. Rilus and Thomas B. Eastman, Indianapolis, have resigned from the faculty of the Central College of Physicians and Surgeons.——Dr. James M. Dinnen, Fort Wayne, has been reappointed a member of the State Board of Medical Examination and Registration, for four years.——Dr. Charles E. Laughlin, Orleans, has succeeded Dr. William A. Stoker as superintendent of the Southern Indiana Hospital for the Insane.

Examination for Interneships.—The competitive examination held by the Board of Health of Indianapolis resulted in the appointment of the following internes for a term of service of one year, beginning on date named: City Hospital, May 1, Drs. F. N. Shipp, E. H. Kiser, and Murray Hadley; November 1, Drs. T. R. Cook, Hiram Johnson, and L. W. Brown; City Dispensary, May 1, Drs. P. S. Johnson, F. W. Crockett, H. S. Mackey, and D. W. Sheek.

Disease and Deaths in May.—The monthly bulletin of the State Board of Health for May says:

> There was less sickness and fewer deaths in May than in the corresponding month of last year. Rheumatism was the most prevalent malady. Influenza dropped from the third place in April to fourth this month, and what was unusual, pneumonia moved up from sixth place in April to fifth place in May. Perhaps the unusually cold damp weather had something to do with this. Smallpox stood second in April and dropped to third place in May. There were 579 cases of smallpox in May in 59 counties, with 10 deaths. Despite the marked and classical character of the cases of smallpox, and despite the deaths, there are still found physicians in almost every county who contend there is no smallpox. Tuberculosis caused 370 deaths, 154 being males and 216 females. Of the total tuberculosis deaths, 179, or 48.3 per cent., were between the ages of 20 and 40. It is awful to lose each month such a large number of the citizens in the most productive period of life. The number of married females between the ages of 20 and 40 who were destroyed by consumption was 68, and the number of married males in the same age period was 28. The total number of deaths in the whole state was 2,421, an annual rate of 11.3 per 1,000. The county death rate was 9.6, and the city 14.6 per 1,000. The death rates of the five largest cities were all above the average, 11.3 for the whole state, as here shown: Indianapolis, 14.2; Evansville, 14.9; Ft. Wayne, 13.8; South Bend, 18.6; Terre Haute, 16. Cancer and typhoid fever, which usually cause about the same number of deaths monthly, show a wide difference this month as there were 38 deaths from typhoid and 80 from cancer. Thirteen and three-fifths per cent. of the total deaths were children under 1 year of age, and 25 per cent. were 65 years and over.

MARYLAND.

Baltimore.

Personal.—Drs. Hugh H. Young and Arminius C. Pole recently sailed for Europe.

Many Failed.—At the recent examinations of the State Board of Medical Examiners held in this city, 135 persons came up for examination, including second-year students and candidates who had previously failed. Of these 71 passed.

Vital Statistics.—Typhoid fever and scarlet fever are on the increase, 20 cases of the former and 30 of the latter being reported during the week ended June 3. The total deaths were 150, equivalent to an annual death-rate of 12.70 per 1,000 for whites and of 19.02 for colored. The chief causes of death were consumption 20, pneumonia 12, cancer 11.

Faculty Changes.—The following appointments have been announced in the Johns Hopkins Medical School: Drs. Joseph C. Bloodgood and Harvey Cushing, associate professors of surgery; Dr. Samuel Amberg, associate in pediatrics; Dr. Charles P. Emerson, associate in medicine; Dr. Joseph Erlanger, associate in physiology; Dr. Warren H. Lewis, associate in anatomy; Dr. Harry T. Marshall, instructor in medicine; Dr. Burton D. Myers, instructor in anatomy; Dr. Florence R. Sabin, instructor in anatomy; Dr. Charles H. Bunting, assistant in pathology: Drs. John B. Briggs, Jr., and A. P. C. Howard, assistants in medicine; Dr. Augustus Pohlman, assistant in anatomy: Dr. Arthur H. Loevenhart, assistant in physiologic chemistry; Dr. Ernest G. Martin, assistant in physiology; Dr. John A. Sampson, assistant in gynecology, and Dr. J. Morris Slemons, assistant in obstetrics.——Dr. John C. Hemmeter has been elected professor of physiology in the University of Maryland School of Medicine, vice Dr. Francis T. Miles, resigned on account of ill health.——Dr. George A. Fleming has been elected professor of eye and ear diseases, and Dr. Mary N. Brown, demonstrator of obstetrics at the Woman's Medical College.

MASSACHUSETTS.

Boston.

Commencement.—Tufts College graduated a class of 49 June 17.

Hospital Alumni Hold Field Day.—The Boston City Hospital Alumni Association held its annual field day June 15. While these gatherings with their associated sports are specially [illegible] younger physicians, not a few of the older men attend and enjoy a jolly afternoon.

To Have Academy of Medicine.—The meetings of the Boston Medical Library this past winter have been so successful that a movement is on foot to organize an academy of medicine in Boston which shall make its headquarters at the library, shall conduct medical meetings and interest itself in matters concerning public health, etc.

Summer Rests Open.—Summer "rests" for women and children are beginning to open. Among them are the Mother's Rest in Newton Highlands, supervised by the ladies of the Protestant churches in Newton Center; another at Rurn Beach managed by the Episcopal City mission; and the Children's Island sanatorium in Salem Harbor.

Boston's Health.—Boston's health, as measured by deaths for the week ending June 13, was practically the same as a year ago, 189 to 187, or 16.81 per 1,000 per annum. Of this number 19 deaths were due to pneumonia; 2 to whooping cough; 23 to heart disease, and 4 to bronchitis. Infants are still unaffected by hot weather, there being only 25 deaths under one year and 38 under five years. Another week passed without a case of smallpox being reported, while diphtheria claimed 32 cases, with 2 deaths; scarlet fever, 29 cases, with 1 death; typhoid-fever, 17 cases, with 1 death; measles, 43 cases, with 1 death, and tuberculosis 19 cases, with 24 deaths.

Carney Hospital Changes.—Radical changes have been made in the surgical department of Carney Hospital. The entire surgical staff, both house and out-patient, twelve in all, failed to be reappointed in June. In their place Dr. John C. Munro has been elected surgeon-in-chief, with Dr. John T. Bottomley as his assistant. They have accepted these positions with the understanding that they will hold them for at least ten years. The out-patient service has not yet been permanently organized. The purpose of these changes is understood to be to prevent the frequent changes in the personnel of the staff, which have greatly annoyed the authorities in recent years. Incidentally it has required the resignation of the two surgeons mentioned from the Boston City Hospital surgical staff, and has permitted the recognition of the many years of faithful service of Dr. Michael F. Gavin by transferring him to the consulting staff.

GENERAL.

Philadelphia Medical Journal.—This journal has been sold to A. R. Elliott, owner of the N. Y. *Medical Journal*, with which it will be amalgamated. A correspondent in last week's issue gives details.

Cholera in Army at Manila.—The new outbreak of cholera in the Philippines has caused the death of six soldiers between June 3 and 10. These cases are considered due to carelessness on the part of the victims in drinking unsterilized water and eating native food.

FOREIGN.

Hydrophobia at Paris.—The Paris Pasteur Institute reports for 1902 the best year of its existence; 1,016 persons were treated, and the mortality was only 3, or 0.18 per cent. One of the fatal cases had arrived from a long distance. In 1900 the mortality was 10, and in 1901 12. The number of animals known to be rabid has also decreased from 846 in 1900 to 474 in 1901. The enforcement of strict measures against vagrant dogs is assumed to be responsible for this favorable showing.

Decrease in British Stamina.—The standard of physique in England is alleged to be deteriorating. Lord Londonderry has made this assertion, and others are now quoting the official figures dealing with the army recruits for the year 1902. In 1900, out of 84,000 recruits offered, 23,000 were rejected for physical and other defects, while in 1902, out of 100,000 (to give simply round numbers) 47,000 were rejected. In these army rejections the agricultural population and the laboring classes of the towns furnish the largest proportion of those physically unfit. Nothing is said in the reports as to whether or not the same classes of the population offered for recruits in 1902 as in 1900.

Meeting Place of the Next International Medical Congress.—Some surprise has been expressed at the selection of Lisbon, so near to Madrid, as the meeting place of the next congress. Posner remarks, in a letter to the *Berliner Klin. Wochft.*, that when the subject came up for decision at the last session, to the consternation of all, it was learned that no invitation had been received from any city or state, and it was feared that the congress would have to adjourn without appointing a future meeting. One hour before the congress dissolved a telegram was received from the Portuguese government with a formal invitation for the next congress to convene at Lisbon, which was immediately accepted.

Richer as Physician and Artist.—The chair of anatomy at the Paris School of Fine Arts is to be conferred on Dr. P. Richer, who has won renown as a painter and sculptor. His work on "Anatomy in Art" had the rare distinction of winning two prizes, one from the Académie des Sciences and the other from the Académie des Beaux Arts. His "Physiologie artistique de l'homme en mouvement" is also a classic in art circles. His statuettes have gained many prizes, and one of them was purchased by the state and placed in the Anthropology gallery at the National Museum. The monument to Pasteur inaugurated at Chartres last week is also his work, and portrait medals of Blanchard, Marey and Chauveau have been much admired. His latest large literary work is "L'Art et la Medecine," profusely illustrated with reproductions of the masters. Portions of this book have been published from time to time in the "Iconographie de la Salpêtrière," with which he has been connected since its foundation by Charcot, who was one of the first to appreciate the value of pictorial representation in clinical reports. Richer's last work is an introduction to the study of the human physiognomy. The fact that he was elected to membership in the Académie de Médecine shows that he has not neglected medicine in his art studies.

Third International Congress of Life Insurance Examiners.—This congress met at Paris, May 25 to 28, with a large and representative attendance. The first congress was held at Brussels in 1899, and the second at Amsterdam in 1901. The reports that have come to hand comment on the increasing tendency of the companies to enlarge the sphere of their activities and not peremptorily exclude so many applicants as in former years. Palme, Stockholm, reviewed the records of 18,132 persons who had applied for life insurance and had been rejected. The results showed that the mortality among them had been less than the average death rate, according to the standard English longevity tables. Among the extra hazardous risks gout was discussed, and the general opinion was in favor of accepting a candidate with gout if over 34 years old, in hygienic surroundings. Under 34, gout is liable to induce serious accidents. On the other hand, a gouty candidate, with evidences of cardio-vascular or renal lesions, should be rejected. Petersen, St. Petersburg, would not accept a candidate who has had acute articular rheumatism until two or three years have elapsed, and Mauriac deems this delay too brief. The rheumatism may affect the heart sounds. The conclusion finally adopted was that a minimum of two years must elapse after the first attack before acceptance of the candidate, and then only in case the heart has not been injured, and there are no arthritic hereditary antecedents. Candidates with essential, nervous asthma may be accepted if young, and free from tuberculous taint, the attacks infrequent. In regard to emphysema, Hirtz, Paris, would reject every candidate whose spirometric register was less than 2,000 c.c., or if the circumference of the thorax did not vary more than 3 cm. at forced expiration and inspiration. His conclusions were adopted. Old, non-tuberculous pleurisy is an acceptable risk, the risk diminishing with the time that has elapsed since. In Bourcy's experience, out of 26 persons who had died from tuberculosis consecutive to pleurisy, 16, that is, 61 per cent., died in less than ten years after the pleurisy. Women are particularly hazardous on account of the aggravation that may follow pregnancy. It was stated that one company accepts without extra premium candidates over 35 who have passed through a coxalgia in childhood and has had no mishaps from this course. Brouardel's suggestion in regard to Pott's disease was accepted by the congress, namely, that the hunchback is defective, but need not be rejected as long as the deformity does not interfere with the functioning of internal organs. This acceptance of tuberculous lesions, even although restricted to old and mild forms, is a significant sign of the more liberal trend of the times. The conclusion adopted in regard to biliary lithiasis was that such antecedents in a remote past do not debar the candidate if all the organs are healthy, or if an operation has been performed at least four years before from which he has entirely recovered. In case of renal lithiasis, it was decided that an operation on this account should entail rejection. The question of obesity was referred to the next congress. In regard to pregnancy, some were in favor of putting off the candidate until after the termination of the pregnancy, but the majority ruled that it was not *per se* an obstacle to acceptance, the examiner being on his guard against speculation. In regard to examinations by specialists, they were not judged necessary unless symptoms attract attention to some special organ. The congress has thus opened a little wider the door to admit candidates formerly inexorably excluded, and the tendency seems to be to open it still wider as time goes on. A full report of the congress is published in the *Semaine Medicale* of June 3.

LONDON LETTER.

Ileocecal Invagination by a Meckel's Diverticulum.

At the Clinical Society Dr. zum Busch described the case of a man, aged 21, who had suffered for several years from abdominal symptoms pointing to an intestinal growth. The condition became suddenly worse after a heavy strain during exertion. Sickness, vomiting, passage of blood, and a rapidly-forming swelling in the ileocecal region led to the diagnosis of invagination from a polypus. Laparotomy was performed, and an ileocecal intussusception was found and reduced with great difficulty. It was secondary to a primary invagination of Meckel's diverticulum into the ileum. Extensive gangrene of the intestine rendered excision of the whole invaginated portion (about three feet) necessary. Side-to-side anastomosis was performed, and uneventful recovery followed. Only 15 cases of invagination of Meckel's diverticulum have been published; in 12 a secondary invagination of ileum into ileum or ileum into cecum occurred. The prognosis is bad; in only one case has recovery followed excision of the gangrenous intestine.

Reform of the Army Medical Service.

The so-called "hospital scandals" in the South African War have led, as has been foretold in The Journal, to great reform of the Army Medical Service. No effort has been spared to make the corps as efficient as possible. The new warrant gives greatly-increased advantages to the officers and offers them an attractive career. It insures: (1) sufficient pay to enable the officer to support himself from the date of entering the service; (2) increased pay to officers in charge of hospitals or when selected for specialist appointments; (3) opportunities for professional improvement by work in the Royal Army Medical College, by the study of disease in foreign countries, and by original research; (4) advancement on account of professional ability and merit and not by order of seniority; (5) permission to retire after three years' service and join the reserve of the corps, receiving a small annual honorarium; (6) a gratuity of $5,000 on retirement after nine years' service, and a pension of $5 a day on retirement after 20 years' service, with increased rates of pension after longer terms. After a competitive entrance examination, of a very practical character, the successful candidates receive a two months' course of instruction at the Army Medical College, London, in hygiene, bacteriology, military surgery and military medical administration. If at the time of entrance officers hold, or have a prospect of holding resident appointments at any of the large general hospitals they will be allowed to retain them, and the tenure of the appointment will be counted as service toward promotion and pension, but they will not for the time receive army pay. After three and a half years and passing a practical examination the officer will be promoted to captain. On completing his foreign service of three or five years he will return home and study for six months at the Army Medical College. This time will be largely occupied in attendance on the clinical practice of various London hospitals, under selected clinical teachers in medicine, surgery, and certain special subjects. After this course an examination, as practical as possible, takes place for promotion to major. It includes general medicine and surgery, bacteriology and hygiene, and a special subject chosen by the candidate. Those who show aptitude in special subjects may subsequently hold specialist appointments at various army centers, receiving increased pay at the rate of $225 per annum. After promotion to major a second period of service abroad. After fifteen years of service the last examination takes place—in purely military subjects. When he has passed this the officer is eligible for the rank of lieutenant-colonel. The following is the new scale of pay per annum, which is greatly improved: Lieutenant, $1,600; captain, $1,870, after seven years' service $2,000, after ten years' service $2,370; major, $2,930, after three years' service $3,155; lieutenant-colonel $3,565, after eight years' service $4,000; colonel, $4,770; surgeon-general, $7,415.

Curvature of Spine Due to Nasal Obstruction.—Redard of Paris has observed (*Gaz. Med. de Paris*) asymmetry of face and figure and even curvature of the spine secondary to nasal obstruction. The cure or improvement in many cases followed rapidly on the removal of the obstruction to breathing.

rubber sheet so that a hollow is formed to hold the water escaping from the wet sponge. Hot-water bottles are placed at the feet and cold cloths or an ice bag on the head. The limbs are wrapped in bath towels wrung out of ice water while sponging the back and chest. The direction to sponge is from the head to the feet with light strokes. A great deal of time should be spent in sponging the muscles of the back. Where the patient is very sensitive strips of cheese cloth should be wrung out of very hot water and placed on the patient, and the iced sponge applied over it, or begin with a tepid sponge and gradually cool to the ice applications. A stimulant should be given the patient just before or after the bath. If the temperature should be lowered too rapidly and the patient does not react well to the ice sponge, hot-water bottles will have to be applied and stimulants administered. Ice applications should not be given in anemic or septic cases or where there is extreme emaciation or valvular heart lesion.

Crede's Ointment.

The following is the composition of Credé's ointment, according to the *Jour. of Tropical Med.:*

℞.	Argenti colloid. (collargol)	ʒviiss	30
	Ceræ flavæ	ʒiv	15
	Adipis benzoatis, 15 per cent.	℥ivss	135

M. Sig.: For local application.

The foregoing ointment has been warmly recommended as a local application in the treatment of the acute parotitis or other forms of adenitis, in meningitis after shaving the scalp, in thrombo-phlebitis and the local infections of streptococcic nature.

Vertigo.

The *New Eng. Med. Jour.* recommends the following in the treatment of vertigo:

℞.	Spts. glonoini	ʒi	4

Sig.: One drop in water three times a day, to be gradually increased until temporal headache is manifested; or:

℞.	Pot. bromidi	ʒiv	15
	Syr. aurantii cort.	ʒiv	15
	Aquæ q. s. ad	℥iii	90

M. Sig.: One teaspoonful three times a day in vertigo from insomnia and overwork; or:

℞.	Sodii bromidi	ʒii	8
	Antipyrini	ʒi	4

M. Ft. cap. No. xii. Sig.: One tablet three times a day in aural vertigo.

Acute Asthenic Pneumonia.

The following outline of treatment in acute asthenic pneumonia is ascribed to Grassert in *Jour. de Med. de Paris:*

Alternate every hour the following mixtures:

℞.	Cognac	℥iss	45
	Elix. simp. q. s. ad	℥iv	120

M. Sig.: One tablespoonful to be taken with some liquid nourishment; and:

℞.	Pulv. ipecac.	ʒss	2
	Aquæ (bullientis)	℥iii	90

Reduce this mixture to two and a half ounces and add:

	Syr. senegæ	℥i	30

M. Sig.: One to three teaspoonfuls in milk as directed above.

The patient should be well fed and the following combination given three times a day:

℞.	Sodii arsenatis	gr. ss-2/3	03-04
	Acidi citrici	gr. xv	1
	Tinct. cola		
	Tinct. cacao, āā	℥ii	60

M. Sig.: One teaspoonful after each meal three times a day.

Medicolegal.

Reasonableness of Doctor's Bill May Be Left to Jury.—In the seduction case of Lampman vs. Bruning, where it was argued that what the doctor charged did not furnish proof of what expense was reasonable, the Supreme Court of Iowa says that such items are rarely the subject of controversy in damage suits, and where the services rendered are of a nature likely to be familiar to the jury, and the charge unquestioned, its reasonableness may be safely left to their determination.

Testimony and Belief in Malpractice Case.—In the malpractice case of Johnson vs. Winston et al., where the Supreme Court of Nebraska reverses a judgment in favor of the parties sued for reasons stated in the commissioners' opinion, the commissioners say that in actions of this kind it is always difficult to obtain professional testimony at all. It will not do to lay down the rule that only professional witnesses can be heard on questions of this character, and then, in spite of the fact that they are often unwilling, apply the rules of evidence with such stringency that their testimony can not be obtained against one of their own members. Again, the commissioners are of the opinion that the rule was stated too broadly in an instruction to the jury that, although a diseased condition, resulting in a malformed and useless hand, was caused by the operation, an amputation of the index finger and metacarpal bone, the parties sued were not liable if they performed the operation with the other party's consent, express or implied, in a careful and skilful manner, under the belief that it was proper to be performed. The "belief," which would excuse the parties sued from the consequences of an operation, must have been a well-founded belief acquired in the exercise of due professional care and skill. The commissioner adds that the authorities appear to lend support to this view. "Known to the profession," it is said, must be understood as being known to the whole profession, not merely to a part, or the most learned members of it.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 13.

1 *On Neurofibromatosis. Joseph Fraenkel and J. Ramsay Hunt.
2 Organization of the Bureau of Public Health and Marine-Hospital Service. Walter Wyman.
3 Diagnostic and Prognostic Data in Nervous and Mental Diseases. William B. Pritchard.
4 *Auto-epidermic Skin Grafting. H. F. McChesney.
5 Report of an Operation for Carcinoma of the Cecum and One of Carcinoma of the Transverse Colon. C. G. Darling and Dean Loree.

1. **Neurofibromatosis.**—Fraenkel and Hunt report four cases of this rare condition: 1. Compression myelitis produced by intervertebral fibroma and terminating fatally; 2, isolated neuromata of the posterior tibial and communicans-peroneii nerves with hyperesthesia and paralysis, recovery after operation; 3, fibromata of peripheral nerves without symptoms, and 4, multiple skin fibromata with a few neurofibromata and doubtful symptoms.

4. **Auto-Epidermic Skin-Grafting.**—The method described by McChesney consists in dissecting up the thin blue line of epithelial cells that margin and encroach on the healing ulcerative surface and cutting off small pieces, about an eighth of an inch square, and placing them on the granulating surface with or without previous curetting. This, he thinks, causes but little pain and does not develop a scar, and at each dressing several new islands can be started. So far as he knows this method has not been before reported.

American Medicine, Philadelphia.

June 13.

6 *On Cysts and Other Neoplasms of the Pancreas. Roswell Park.
7 *Fourth-of-July Tetanus. H. Gideon Wells.
8 *Nephrolithiasis, with Report of Case.. Charles D. Lockwood.
9 Orbital Cellulitis as a Sequel of Scarlatina; the Report of Two Cases. Burton Chance.
10 Arteriovenous Aneurism of the Femoral Vessels; Ligation of the External Iliac Artery; Failure of Collateral Circulation; Amputation; Death. Schuyler C. Graves.
11 A Case of Post-Operative Tetanus, with Special Reference to the Focus of Infection. Levi J. Hammond.
12 Echoes from the Madrid International Medical Congress. Nicholas Senn.

6.—See abstract in THE JOURNAL of May 30, p. 1524.

7. **Fourth of July Tetanus.**—Wells graphically shows the epidemics of Fourth of July tetanus during the last three years. In 1901 it did not seem to appear in Chicago, but was marked in 1900, and very noticeable in 1902. In the city of Greater New York the curve is very similar to that of Chicago though the number of cases is smaller in proportion to the population. In Washington, Fourth of July tetanus does not seem to exist, owing to the salutary regulations. He reviews the incidence of tetanus at the various seasons of the year, and finds, entirely aside from the Fourth of July cases, that the summer months have the greatest mortality. As to the character of the wounds producing the Fourth of July cases, he finds that in nearly every case they were due to blank cartridges, the wads usually striking the hand with a tendency to carry before it a disc or tube of palmar skin, and when this has happened we have absolutely ideal conditions for tetanus production. At the bottom of the wound is a wad of skin and a wad of cardboard, making a sandwich beneath which is a layer of dirt. It is unfortunate that we have not the data as to the total number of blank cartridge wounds that occur near the Fourth of July, but judging from the number of cases in Chicago, Wells thinks that the percentage of tetanus following them would be large. Every case of blank cartridge wound should be considered from the start as dangerous, and be treated as thoroughly as if we knew that the tetanus bacillus was in the bottom of the wound. The importance of such thoroughness is shown by a case reported by Dr. Bain of the Massachusetts General Hospital, where a blank-cartridge wound had escaped tetanus, in spite of the existence of living tetanus bacilli in the wound. When tetanus is developed of course the treatment is that of any other case of the disease, but the principal thing is prophylaxis, and this is what he specially emphasizes. Of course, the real ultimate prophylactic would be the prohibition of Fourth of July celebration with fire arms, etc., but next to this comes the proper treatment of the wound.

8. **Nephrolithiasis.**—Lockwood reports a case in detail which illustrates the advantages obtained by modern methods of establishing the functional capacity of the kidney and the greater precision in diagnosis afforded by the Roentgen rays. He emphasizes that:

1. It is usually possible to make an accurate diagnosis of renal calculus with the means now at hand. *It is no longer excusable to pronounce every kidney complaint "Bright's disease," as had been done in this case, simply because there is a trace of albumin in the urine.*
2. Proper preparation of the patient is an important adjunct in every kidney operation. This preparation *consists* in the following:
   (*a*) *Increasing the functional activity of the kidneys until the* total output for twenty-four hours equals or exceeds the average for a normal individual. This *may be done* by the free ingestion of fluids and by giving enemas of normal salt solution for several days *preceding* operation. During and immediately following operation salt solution should be given subcutaneously in large *amounts.*
   (*b*) The administration of urinary antiseptics, especially urotropin and salol.

Boston Medical and Surgical Journal.

June 11.

13 *Dermato-myositis. F. Forchheimer.
14 ed Conditions. (To be con-
15 * D. Crosby Greene, Jr.
16 *cle Occurring in a Girl of* Thirteen. Francis D. Donoghue.

13. **Dermatomyositis.**—The case reported is that of a *neurotic* woman, aged 40, who suffered from swelling of the muscles, erythematous eruptions, pustular formations, rise of temperature and pulse, and emaciation, the edematous swelling being followed by desquamation. There was a strong suggestion of an angioneurotic condition in this case, and the author remarks that Köster's hypothesis of a vasomotor origin to the disorder seems considerably supported. Forchheimer thinks the condition may be produced by a number of causes and until these are worked out we can only rely on symptomatology for diagnosis, but the symptoms are being constantly added to with each case reported. He remarks, however, that there are sufficient characteristics. The clinical picture of a typical case of dermatomyositis is one not to be forgotten, and the diagnosis is easy when it is typical and when one has already seen a case. (See editorial, June 20.)

15. **Congenital Inspiratory Stridor.**—Five cases have the last three years been brought to the Boston Chil Hospital, and Greene reports a typical one. All had a fo in of the epiglottis backward, forming a sort of tube wi slit behind. The lesion he locates in the upper part of pharynx. In two cases in which the stridor has been grown there is still a marked inrolling of the lateral mar The essential symptom is a modification of the respirat sound during inspiration, characterized by a musical n which has been likened to the crowing of a chicken or, in n cases, to the purring of a cat. It is always noted immediat after birth or within a few days, although it may be ov looked at first. It is continuous during waking and sleepi and is aggravated by excitement. The voice is not affecte Expiration is usually quiet, but when the symptom is inten it may also be heard during expiration. It does not seem produce distress, but *temporary cyanosis* sometimes occu during the height of the stridor. The obstruction, while n affecting the general health under favorable conditions, seem to render the child rather more susceptible to pulmonary affec tions. It usually *increases* up to the third or fourth montl and remains the same until the *child* is *about one* year old It then gradually disappears, finally only appearing during excitement and then disappears altogether. The prognosis is good. One case of death, however, due to laryngeal obstruction, simply from this cause, has been reported. The treatment *consists in guarding the infants from respiratory trouble,* and keeping them properly nourished in order to resist the better. Intubation of the trachea may be required in very rare cases, but in the majority there is no call for operative interference.

Philadelphia Medical Journal.

June 13.

17 Address. First Annual Conference of State and National Health Authorities, Washington, D. C., June 3, 1903. Walter Wyman.
18 *Immunization from Tuberculosis. D. E. Salmon.
19 The Present Status of the Treatment of Superficial Carcinoma and Tuberculosis by Means of the X-Rays. William L. Rodman and G. E. Pfahler.
20 *The Value of Widal's and Ehrlich's Tests in Typhoid Fever. Orville Kennedy.
21 *Things to Consider Before Sending the Tuberculosis Patient Away *from* Home. Martin L. Stevens.
22 Florence Nightingale. W. C. Cahall.

18. **Tuberculosis.**—Salmon's article is *chiefly historical,* incited by Flexner's statement crediting Theobald Smith and Trudeau with the earlier facts on which immunization to tuberculosis is based. He says Flexner has done an injustice to de Schweinitz in ignoring his earlier work. De Schweinitz had discovered that certain human tubercle bacilli could be administered to cattle subcutaneously, intravenously and intraabdominally without producing the disease, and administered them with the idea of producing immunity in cattle before Smith's papers were published. The later work of Behring and *others is really antedated* by these early experiments.

20. **Typhoid Fever.**—The value of the Widal and diazo-reaction in the diagnosis of typhoid is discussed by Kennedy, who sums up that the Widal test *furnishes* the earliest and most positive evidence, but a bacteriologic laboratory is required to make it available to the practitioner. The diazo-reaction, though not pathognomonic or conclusive, is a valuable aid in making an early diagnosis. Its presence *certainly* differentiates between malaria and typhoid and *practically eliminates* all but measles, acute tuberculosis and probably *certain* septic fevers.

21. **Tuberculosis.**—The various *conditions* which should affect the decision of the physician in sending a patient away from home are reviewed by Stevens. Among them are the questions of the amount of benefit to be derived, the character of the patient, whether he will be able to resist unfavorable tendencies, his financial *condition and* the medical care he will receive in his new location, the character of the health resort, and lastly, the instruction of the patient as regards his responsibility to the public is emphasized. He says before sending your patient away from home:

Consider his character with reference to the influence it will have on his prospect of recovery.

Consider his financial condition, and that, if sacrifice has to be made, it is the part of wisdom and economy to make it early.

esider his need of medical care and control wherever he is, a-at good treatment in an unfavorable climate is better than orable climate without treatment.
asider the facilities which the health resort offers for the cure ; disease, rather than those offered for his pleasure.
isider the need of candor as to his condition and his respon-ly to the public.

Medical News, New York.

June 13.

- *Colchicum in the Treatment of Gout. Charles C. Ransom.
- *Four Months' Experience with Antistreptococcic Serum in Pulmonary Tuberculosis. S. G. Bonney.
- The Origin of the Eosinophiles and Their Diagnostic and Prognostic Importance. Thomas R. Brown.
- *The Morbid Anatomy and Pathology of Tabes. (To be continued.) Joseph Collins.
- Leucoplasia in Secondary Syphilis. Douglass W. Montgomery.

3. **Colchicum.**—Ransom discusses the action of colchicum in e treatment of gout and says that the varying effects of the ig on the urine and urea excretion are due to faulty methods experimentation. His own experiments agree with those ide by Fawcett and Garrod, and he concludes that the effect colchicum on the urinary secretion is at least not to augment but rather to diminish it, while the uric acid and urea excreon is not affected. He prefers to use the alkaloid colchicin, nd gives it in small doses. He has used it for weeks and ionths at a time, and never observed any cumulative action. is to its benefits in kidney disease he has very little question, hough the latter has been considered a contraindication. How t acts he does not venture to say.

24. **Tuberculosis.**—*Bonney* [illegible] *number of cases*, 25 altogether, of tuberculosis trea [illegible] antistreptococcus serum injections. All were apparently hopeless, and other methods, such as favorable climate, etc., had not been effective. Three cases seem to be fairly on the way to cure; 4 show marked improvement; 5 seem to be improved though the final prognosis is yet uncertain; 8 show a degree of improvement, but not such as to modify the unfavorable prognosis, and in 3 the effect of the serum, if any, is in doubt. In the 3 remaining cases no actual results have been obtained. The serum was inapplicable in at least 2 of them, according to subsequent de-opments. In a number of cases urticaria appeared, follow-the injections. He thinks that it is sufficient to say that if had been established that the serum, even in a single been instrumental in conjunction with appropriate in restoring the patient to health, its utility is de-

26. **Tabes.**—*Collins, in this installment of his article,* describes the pathologic changes observed in the spinal cord, columns of Burdach and Goll, and posterior horns and in the peripheral nerves and spinal ganglia.

New York Medical Journal.

June 13.

28 Address, First Annual Conference of State and National Health Authorities. Walter Wyman.
29 *The Surgery of the Prostate from the Standpoint of Personal Experience. (To be concluded.) Granville MacGowan.
30 A Historical Sketch of the Ear Department at the New York Eye and Ear Infirmary. Gorham Bacon.
31 The Need of Combined Action Among the Various Medical Specialties. J. W. Putnam.
32 *Report of Some Surgical Cases. W. Monroe Smith.
33 *Spermaturia. Arthur R. Elliott.
34 Do Our Present Ways of Living Tend to the Increase of Certain Forms of Nervous and Mental Disorder? Charles E. Atwood.

29. **Prostatic Surgery.**—MacGowan describes the history and methods of prostatectomy and advocates operation in cases of hypertrophy *with decided inconvenience.* He does not think that the presence of blood, albumin, casts, or old age and feebleness within reasonable limits, are contraindications. As to the method of treatment he is eclectic, using perineal, suprapubic and the Bottini operation, according to the case, favoring, however, perineal section in the majority of cases. He favors drainage, especially when the urine is alkaline and the bladder contains calculi or incrustations. *In important operations* he uses two quarts of normal salt solution hypodermically, while the patient is under the anesthetic; this is repeated every three hours until the drainage tube shows a free secretion of urine.

32. **Gallstone Impaction in the Liver.**—Smith reports a case of nodular liver tumor in which large amounts of gallstones, 71 altogether, some of them of large size, were impacted in the liver substance and removed successfully, the patient making a good recovery. *He also reports* several other operations for gallstone, hematoma, rectal gangrene, etc.

33. **Spermaturia.**—Elliott urges examining albuminous urine for spermatozoa. He reports cases showing that the reactions produced by seminal elements in the urine very closely resemble those produced by serum albumin, and may easily prove a confusing element in albumin testing.

Cincinnati Lancet-Clinic.

June 13.

35 *The Examination of the Functions of the Stomach by Means of Gerber's Acid Butyrometer. Frank L. Rattermann.
36 *Constipation in the Aged and Constipation Produced by Reading While Defecating. George J. Monroe.
37 Surgery of Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

35. ***Stomach Examination.***—Rattermann's article details th methods of stomach examination with a special illustrated de scription of Gerber's acid butyrometer and the method of it use.

36. **Constipation in the Aged.**—Monroe calls attention to th tendency of oatmeal, taken habitually, to produce constipation Phosphate of soda he finds one of the best laxatives in thes cases. There is difficulty also in inducing old people and th majority of females to take enough water. This is one caus of constipation. Every adult should drink from a quart to gallon of water every twenty-four hours, beside the quantit obtained in food. He has never heard that cascara affects th heart, but he is pretty sure that in one instance it retarded th circulation. Another bad habit which he mentions as tendin to constipation is the habit of reading at stool.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinica lectures, single case reports and trials of new drugs and artificia foods, are omitted unless of exceptional general interest.

British Medical Journal, London.

June 6.

1 *The Red-light Treatment of Smallpox. Is the Treatment o Smallpox Patients in Broad Daylight Warrantable? Niel R. Finsen.
2 *Recent Electrotherapeutics, with Special Reference to Malig nant Disease. John MacIntyre.
3 *The X-rays in the Treatment of Lupus, Rodent Ulcer an Other Skin Diseases. Malcolm Morris and S. Ernest Dor
4 Further Observations on the Treatment of Rodent Ulcer b the X-rays. James H. Sequeira.
5 Treatment of Lupus by X-rays and Ultraviolet Rays. H. F Gamlen.
6 Tuberculosis of the Conjunctiva Cured by the X-Rays. Sydne Stephenson.
7 *Further Work on Amebic Dysentery in India. Leonar Rogers.

1. **Smallpox.**—Finsen argues for the position held by him fo the past ten years, that diffuse daylight is bad for smallpo *cases and tends to aggravate the skin lesions and that th* cutting off of the chemical rays and the use of exclusive re light is one of the best measures of treatment. He has foun the beneficial action of the red light to have been demon strated in the practice of some of his confrères.

2. **Recent Electrotherapy.**—MacIntyre describes high fre quency and high potential currents. He has not seen any abso lute cures from them, though amelioration has taken place i genuine malignant disease. Most workers prefer the *x*-ra for such disorders.

3. ***X-Rays in Lupus, Rodent Ulcer, Etc.***—Morris and Dor find that the *x*-ray has a well-deserved sphere of usefulness but in the case of lupus vulgaris is much inferior as a curativ measure to the Finsen treatment. It, however, supplies cer tain shortcomings of the latter where the *x*-rays can be sup plied to cavities inaccessible to the Finsen light. In dealin with the mucous membranes the *x*-rays are more effective *The combination of the two methods, reinforced, if need be, by* the use of pyrogallic, salicylic or carbolic acid, or other caustic applications, may be trusted to give good results in the treat ment of lupus where the disease has not become too extensive to be managed. They believe there is good reason to think lupus and rodent ulcer may be kept under control, rences are promptly handled.

7. Amebic Dysentery.—Rogers conclu[illegible]

Amebic dysentery has marked clinical and ulcer[illegible] which enable it to be easily distinguished from the [illegible] bacillary type of the disease.

Amebic abscess of the liver secondary to [illegible] dysentery may be produced (1) by infection [illegible] with or without previous collections or (2) the [illegible] portal vein producing sufficient clotting in it [illegible] a focal necrosis in one or both parts of the liver [illegible] extension taking place by means of a similar process.

If staphylococci reach the liver with the [illegible] especially occurs when gangrenous sloughing of the [illegible] complicates amebic dysentery, then multiple small [illegible] interlobular branches of the portal vein containing [illegible] staphylococcal result.

The Lancet, London.

June [illegible]

8 *The Perils and Complications of Fib[illegible] the Menopause. J. Bland Sutton.
9 *Mental Unsoundness Amounting to [illegible] Insanity and Its Diagnosis. Robert Jones.
10 *The Treatment of [illegible] Hernia [illegible] Arthur E. Barker.
11 On the Relation [illegible] Secretion and the Breaking Down of the White [illegible] Oliver K. Williamson.
12 A Form of Removable Deep Suture. [illegible] Milton.
13 A Case of Typhoid Perforation [illegible] M[illegible]ullan.
14 Some Observations on Movable Kidney [illegible]rdon.
15 Appendicitis with Perforation [illegible] Closely Resembling Typhoid Fever. Charles [illegible] and Cuthbert S. Wallace.
16 Soil Nitrification as the Defence [illegible] Malaria and Other Mosquito-borne Diseases. Arthur R. W[illegible]

8. Fibroids.—Bland Sutton protests against the notion that fibroids are comparatively harmless. The greatest and most frequent danger after the menopause is their septic infection and necrosis. He believes that there is a special risk of this in the tendency of the uterus to attempt their extrusion, and, when this has become partial and the os is dilated, the entrance of germs is easy. He believes they also have a bad effect in delaying the menopause and in impaction or injury to other organs by calcified fibroids.

9. Mental Unsoundness.—Jones discusses the characteristics of insanity, and concludes that it would be proper to certify persons as insane if they are suffering from any of the acute forms, for such are potential suicides; if they are suffering from paranoical or persecutory delusions, for such are potential homicides, or after the early symptoms of general paresis occur or there is great violence, noise, excitement and sexual trouble; but we are justified in not certifying to insanity in young persons of either sex if the trouble is due to a toxin or if it is of a mild or subacute and temporary variety.

10. Enterectomy.—Barker holds that the danger of gangrene is not exactly at the point of lesion in strangulated hernia but for four or five feet further back above the constriction. If the hernia is simply put back or an artificial anus made, the danger is great. In either case relief comes slowly. He thinks where the patient is in a reasonably good condition to take out the paralyzed or sodden and ulcerated intestine with all its contents is relatively the safest course. He illustrates his methods and reports cases.

Berliner Klinische Wochenschrift.

17 (XL, 19.) Facial Paralysis. M. Bernhardt.—Zur Pathologie veralteter peripherischer Facialislahmungen.
18 *The Dilution Functional Test of the Kidneys. H. Roeder.—Die Gefrierpunktserniedrigung [illegible] ihre Deutung auf dem Wege der [illegible]
19 *Treatment of Chronic Intestinal Ca[illegible] bad).—Ueber die Behandlung primare chron Dickdarm catarrhe mit hohen Eingiessungen.
20 (No 20.) *Zur Etiologie der Tabes. E. v. Leyden.
21 Temperature of Chronically Diseased Joints and Congested Members. M Herz.—Ueber die Temperaturverhaltnisse chronischer erkrankten Gelenke und gestauter Gliedmassen.
22 Zur Etiologie des Diabetes mellitus. Lenné.
23 Zur Kenntniss der morphologischen Vorgange (processes) bei der Infection und Immunitat. A. Wolff.
24 (No. 21.) *Zur Fra[illegible] J. Morgenroth.
25 Veronal, ein neues [illegible]
26 *Radiography withou[illegible]ber ein vereinfachtes Verfahren der Roentgenphotographie.
27 Exercise and Alcoholism. F. Huppe.—Korperubungen und Alkoholismus.

18. The Dilution Functional Kidney Test.—This new test has been described in these columns and testimony to its value is accumulating. It consists in examination of the behavior of the kidney after ingestion of a large amount of a standard mineral water. Roeder now proclaims that the test is as effectual after ingestion of fluid food, and that it is the key which explains the variations in the freezing-point of the urine in disease. The results of cryoscopy have l[illegible] fective by the lack of some standard for the previo[illegible] gested food or fluids. The higher freezing-point of th[illegible] in nephritis is a sign of impaired power of diluting the secretions, the expression of diminished faculty of accom[illegible] tion on the part of the kidneys to any increase in the amo[illegible] fluids ingested. He has established these facts by study [illegible] osmosis of the kidneys in nurslings and by the behavior [illegible] kidneys in adults when put on fluid food, the findings al[illegible] firmed by the experiences with the dilution test. After i[illegible] tion of a large amount of fluid the freezing-point in a s[illegible] kidney rapidly rises to —.3; —.2; —.1, and even —.03, [illegible] the nephritic kidney does not adapt itself to the new condit[illegible] and no amount of fluid ingested is able to bring the free[illegible] point of the urine from this kidney up to that of its s[illegible] mate. The freezing-point remains almost constant. [illegible] very constancy in the behavior of the freezing-point, the [illegible] of any power of accommodation on the part of the infla[illegible] organ to adapt itself to the increased intake of fluids, expl[illegible] many problems in the pathology of the kidney. The freezi[illegible] point remains invariable during the dilution test as at ot[illegible] times, the figure the same as that determined by cryosc[illegible] without the ingestion of a large amount of fluid. Further [illegible] search on older children with nephritis and in scarlet fever a[illegible] measles has demonstrated that the freezing-point sank on [illegible] mixed diet, while it rose on milk alone. Cryoscopy of t[illegible] urine, therefore, when [illegible]sociated with that of the bloo[illegible] is not conclusive unless [illegible] on a given dietary.

19. Treatment of Chronic Intestinal Catarrh.—Aldor ha[illegible] been almost invariably successful in the treatment of cases [illegible] old chronic catarrh of the large intestine which have defied a[illegible] previous treatment. His method has failed only in those o[illegible] ten years' standing or longer, with probably irreparabl[illegible] anatomic lesions. He commends it as the most radical treatment yet devised, far superior in its results to any other methods in vogue. It is merely flushing the intestines with hot Carlsbad water, followed by external application of heat to the abdomen. After a cleansing enema he inserts a wide, rubber tube, at least 85 cm. long, pushed in its entire length. He then injects through it 1 to 3 liters of Carlsbad water, which has established anticatarrhal power. The temperature of the fluid must be at least 113 F. After the injection heat is applied to the abdomen by means of a thermophore appliance, for several hours. He describes 18 cases followed for a long time, out of his extensive experience, some of five to ten years' standing. There were no pains nor aftereffects in any instance. He does not use it in any case until after other methods have proved unavailing, and the catarrh is at least six months old. The method is equally effective whether the catarrh takes the form of constipation or of diarrhea.

20. Etiology of Tabes.—Aside from syphilis, v. Leyden claims trauma, over-exertion and getting chilled as etiologic factors, in the absence of syphilis. The trauma is usually a concussion or contusion, a fall on the head, as in the case of a Russian merchant, 32 years old, whom he had occasion recently to observe. He has also seen a second case recently, a railroad official, 46 years old, whose left foot had been crushed and the neck of the left femur broken in another accident later. Trauma is accepted in the etiology of syringomyelia and multiple sclerosis, and Stadelmann has lately called attention to the tardy apoplexy after trauma. The tendency of recent research is to establish that commotions of the nervous system induce anatomic lesions from the start. Minor of Moscow has discovered minute hemorrhages and tiny foci in the spinal cord. If the concussion is able to induce these lesions in the blood and lymph apparatus, we may safely assume that something of the kind occurs also in the nerve fibers, although not yet demonstrated, and under certain circumstances, may exhibit a tendency to a progressive course. It is even possible that a concussion may entail necrosis of the axis-cylinder either by altering the position of the single atoms of the molecule or in some other way. There is, therefore, no theoretical reason against the acceptance of trauma as a cause of tabes. The ıs usually appear first in the limb involved in the or are most severe in this region. He describes 3 cases h over-exertion in the motor tract was the direct cause s. Case 1 was a sewing woman of 31, who for seventeen ad run the machine about six hours a day, using mostly ght leg. The first symptoms were violent and painful ctions in the right leg. Case 2 was also a sewing woman, or twenty years had worked the machine for ten hours a Her first symptoms were uncertain gait and lancinating in the legs. Case 3 was a woman of 47 who had also the machine daily for several years. Ataxia was marked and there was nothing to suggest syphilis in the history esent status. He has collected a few other similar cases, re sewing women and 2 constantly employed on a papering machine. He has himself observed a fourth case, a keeper of 40, who had written continuously at night for ı years. His initial symptoms were uncertain gait and bness in the fingers. Any stimulus affecting a nerve fiber ts also the ganglion cell, as the former is merely the pheral process of the latter. Excessive functioning of a e tract may entail injury leading finally to atrophic disearance of the nerve substance and ingrowth of the glia. nger's research has established this fact. He experimented a large number of rats. They were hung up by the tail placed in revolving cages. The poor animals exerted themves enormously in their efforts to escape. When examined, er a few weeks, degenerative lesions were discovered similar those noted in tabes, and with the same distribution, even the sparing of the rounded top of the posterior columns in ny cases, which were exempt from degeneration, the same in tabes. Three cases of tabes consecutive to getting chilled ve also come under v. Leyden's observation. The chilling in ch case was very severe, in one, a ragpicker was snowed in nd was apparently frozen to death, but recovered, and had abes later. Another was a man of 40 who from his seven-eenth to his thirty-fourth year had been engaged in a beer ellar [illegible] compelled to stand to his ankles in cold water. The hird [illegible] was a magistrate in Holland, 58 years old, who [illegible] ade a practice of ultra-Kneipp measures, bath- [illegible] ing and night in ice water, wearing shoes with- [illegible] and frequently standing in glacier water to his [illegible] *in the mountains.* He finally broke through the en hunting, and had pain in the sciatic nerve on both sides, followed in the course of five years by uncertainty of gait, vesical weakness, ataxia and other symptoms of tabes. The chilling trauma affecting a peripheral nerve injures the spinal ganglion, similarly to a mechanical injury, and the relt is *degeneration of the neuron in the posterior column.*

24. **Tests of Antimorphin Serum.**—Morgenroth's experiments o not substantiate the assertions of Hirschlaff in regard to is curative serum for morphin addiction. The latter's results ere probably only apparent. The doses he injected were not bsolutely fatal for the animals. To date no one has suceeded in producing an antitoxin actually effective against oisons of known chemical composition.

26. **Radiography Without Plates.**—Kronecker takes the adiogram directly on the silver bromid paper, but he states hat ordinary sensitized paper will not do, as it is too coarserained. A special paper is made for meteorologic work, and s sold only to scientific stations at present. This paper should e procured, and with it the picture can be taken, developed, nounted and presented complete in thirty minutes. The only rawback is that it can not be manifolded as with a plate. The radiogram, however, can be easily photographed when a number of copies are desired.

Centralblatt f. Kinderheilkunde, Sprottau.

Last indexed page 547.

28 (VIII, 1.) Success of Organ Treatment of Case of Myxedema. K. Mendel.—Erfolg der Org.-Therapie in einem Fall von infantilem Myxedem.
29 Echinococcus der Pleura (Rippen-Resektion, Abstossung des Sackes in toto.). C. Springer. Complete recovery after operative treatment.
30 (No. 2.) Herpes tonsurans im Kindesalter. M. Joseph (Berlin).
31 (No. 3.) Erfahrungen über Sanatogen. E. Fromm.
32 Ueber Xeroform in der Kinderheilkunde. E. Toff (Braila).

Centralblatt f. Kr. der Harn- u. Sex.-Org., Leipsic.

Last indexed page 477.

33 (XIV, 1.) *Ein cystoskopischer Demonstrations-Apparat. R. Kutner (Berlin).
34 Zur Diagnostik der Spermatocystitis. A. Mayer (Worms).
35 Diskussion über die operativen Behandlung der Prostata-Hypertrophie. Bransford Lewis (St. Louis).
36 (Nos. 2-3.) *Rupture of Bladder. W. Nobe.—Ueber Blasenruptur.
37 Physico-Therapy of Affections of Testicles and Adnexa. J. Zabludowski (of Berlin University Massage Institute).—Zur Therapie der Erkrankheiten der Hoden und deren Adnexe. (*Concluded from No. 12, 1902.*) 16 *cuts.*
38 *Zur Kathetersterilisation. R. Kutner (Berlin).
39 Irritation from Phloridzin. O. Pielicke.—Nochmals zur Phl.-Reizung.
40 Yeast for Determination of Minute Sugar Content. T. Lohnstein.—Zur Bestimmung kleinster Zuckergehalt durch Hefegärung.
41 *Ueber das Vorkommen ven Streptokokki in der normalen Urethra des Mannes. B. Asakura (Berne).
42 (No. 4.) Experimental Research on Fate of Tubercle Bacilli Introduced Into Renal Arteries. P. Asche (Strasburg).—Ueber das Schicksal, etc.
43 Das retrograde Cystoscope. F. Schlagintweit (Munich).
44 *Mechanical Treatment of Urethral Affections.* E. Remete (Budapest).—Zur mech. Behandlung der Harnröhrenerkrankungen. Illustrates an insinuator (Gleitsonde) and dilator.

33. **Cystoscope for Two Observers.**—In teaching the use of the cystoscope, Kutner has felt the want of an instrument which would allow two persons to look through it at once. He has devised an appliance for the purpose which can be fitted to any cystoscope provided with a screw thread to receive the metal cap to protect the optic apparatus. In the cystoscope specially devised for demonstrating purposes, the ordinary tube is lengthened, and a second tube screws on it at right angles, with a mirror inserted below which reflects the image into this second tube without interfering with the image seen through the lengthened tube of the cystoscope proper. This second tube and mirror can be removed at will.

36. **Rupture of Bladder.**—Wemmers published in 1900 a statistic of 24 cases of rupture of the bladder, with 13 recoveries. Nobe has since collected 32 cases, and adds 3 personally observed, and described in detail, with full abstracts of the others. Of the 21 operated on 18 recovered, while only 7 recovered out of the 7 not operated on. He concludes from his general review that the diagnosis must be based on the rigidity of the abdominal wall soon after the injury, the tenesmus without defecation, palpation of a fluctuating tumor and dulness in bladder region. The latter is not always absolute, occasionally there may be a deep "box tone." There is generally a more or less intense and tormenting desire to urinate, while but a small amount of bloody urine is voided or none at all. In only two instances on record was the urine free from blood, and in both of these the rupture was at the vertex of the organ, the least vascular portion. It must be borne in mind that the bleeding in case of a laceration of the urethra is not under the control of the sphincter. The permanent catheter *will determine the amount of urine in the bladder and whether it is escaping internally.* If an extraperitoneal rupture is established the operation should be as for sectio alta and the rupture be sutured if readily discovered. If not, tampon and drain the surrounding region, introduce a permanent catheter and close the wound except for the tampon. Three of the cases reviewed healed without complications, although no attempt was made to suture the rupture. In case of an intraperitoneal rupture the tear must be located and sutured, or else the peritoneum should be sutured to the bladder as far back as possible, to transform it into an extraperitoneal rupture.

38. **Pocket Sterilization of Catheters.**—Kutner gives cuts of a small metal box like a cigar case, the top of which can be drawn up like a collapsible cup until it forms a steeple in the center of the box. A small alcohol lamp in the bottom of the box generates steam. The catheter is hung in the steeple and the steam has to pass through it to escape. Among the advantages claimed for the contrivance are that the catheter hangs freely without touching at any point, while the sterilization can be rapidly and thoroughly accomplished.

41. **Streptococci in Normal Male Urethra.**—Asakura found streptococci in 12.5 per cent. of 50 subjects examined, some with and some without gonorrheal affections.

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SOCIETIES.

Abbreviations:
A.—Association.
S.—Society.
M.—Medical, Medicine.
Acad.—Academy.
Phys.—Physicians.
Surg.—Surgical, Surgery, Surgeons.
Coll.—College.
Ry.—Railway.
Dist.—District.
Cong.—Congress.

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